Chapter 2.0

SIGNIFICANT ENVIRONMENTAL EFFECTS

Section 2.1

TRANSPORTATION/CIRCULATION

CHAPTER 2.0 – SIGNIFICANT ENVIRONMENTAL EFFECTS

2.1 Transportation/Circulation

Traffic impacts are addressed in Section 4.7 of the EOMSP Final EIR. The EOMSP EIR found that the Master Plan of Streets for the EOMSP is consistent with the goals of the County Circulation Element. Nonetheless, the Final EIR concluded that significant and mitigable impacts would arise due to the traffic generated during the EOMSP implementation. Since the adoption of the EOMSP, the County approved an SPA in 2002 that divided the Plan Area into two subareas and modified the land uses and Circulation Element within the western portion of the Subarea Plan (as described in the Chapter 1.0, *Project Description, Location and Environmental Setting*). This amendment also concluded that traffic impacts would be the same or less, and roads in the Specific Plan area are projected to operate consistent with the Public Facility Element standards (County of San Diego 2002d), provided that subsequent projects implement the identified mitigation measures in the EOMSP Final EIR. Namely, a mitigation measure was identified to require that projects within the EOMSP provide a traffic impact report to analyze and mitigate their off-site traffic impacts. Another County SPA was approved in 2007 that revised the circulation plan of the EOMSP, among other items (County of San Diego 2007e).

The County determined in the *Environmental Review Update Form for Projects with Previously Approved Environmental Documents* (Appendix A) for the proposed project that various roads in the project vicinity are at, or will be at, level of service (LOS) E or F. As a result, the project traffic was considered to have a potentially significant impact on roadways within the City of San Diego and unincorporated area, and is, therefore, evaluated further in this EIR.

The following discussion is based on a traffic study completed by Darnell & Associates in September 2010. The full report is included in Appendix B.1. A sight distance study was completed by Project Design Consultants in 2007, and approved by the County in 2009. This study is included as Appendix B.2.

2.1.1 Existing Conditions

As illustrated in Figure 2.1-1, *Local Roadway Network*, the project site is located within a roadway network that consists of a series of major streets and highways. The study area covers areas within the jurisdictions of the City and County of San Diego. As a result, both the County and City of San Diego's criteria were utilized to determine the study area for the project. The County's criteria recommends the inclusion of all transportation facilities that receive 25 or more peak hour trips from the proposed project, and the City of San Diego's criteria requires the analysis of all regionally significant arterial system segments and intersections, where the proposed project will add 50 or more peak hour trips in either direction. The County or City criteria were utilized dependent on the jurisdiction in which the roadway segment or intersection or intersection was located.

Circulation Network

The existing roadway system is depicted in Figure 2.1-1, and described below.

Roadway Segments

Local Roadways

Otay Mesa Road (Old Otay Mesa Road) (SC-1120) is an east-west roadway with varying widths located within the jurisdictions of the County and City of San Diego. The segment from approximately 1,200 feet east of Sanyo Avenue to SR-905 is located within both jurisdictions, with the centerline of the existing road as the boundary. The majority of this roadway is two lanes with the following exceptions: four-lane segment between Harvest Road and Sanyo Avenue, six-lane segment between the SR-125 southbound ramp and the Interim SR-905 connection; five-lane segment between Interim SR-905 connection and Harvest Road. For the purpose of analysis, these segments of Otay Mesa Road (Old Otay Mesa Road) were assumed to have the capacity equivalent to that of a modified four-lane Major Road with the exception of the segment between Harvest Road and Sanyo Avenue that is assumed to have the capacity of a four-lane Major Road. The current capacity on the City two-lane segments of Otay Mesa Road (Old Otay Mesa Road) is estimated to be equivalent to that of a two-lane Collector Road.

Enrico Fermi Drive (SA 1105) is a north-south, two-lane facility. This roadway segment is split between County and City of San Diego jurisdictions. The segment north of Airway Road is under the County's jurisdiction. The segment south of Airway Road is under the City's jurisdiction.

La Media Road (SA 1103) is under construction associated with the SR-905 interchange and presently has varying widths. The segment of La Media Road between Otay Mesa Road and Saint Andrews Avenue/future SR-905 westbound off ramp was assumed to have the capacity equivalent to that of a four-lane Collector. La Media Road from Saint Andrews Avenue/SR-905 westbound off ramp to Siempre Viva Road is currently constructed as a two-lane, undivided roadway that has a classification equivalent to that of a two-lane Collector.

Airway Road (SC-2300) is an east-west roadway of varying lane widths that is located within the jurisdiction of both the City of San Diego and the County of San Diego. The majority of this roadway is two lanes; Airway Road is four lanes between La Media Road and Piper Ranch Road, three lanes for 150 feet east of Piper Ranch Road, and is four lanes from just east of Enrico Fermi Drive to its current terminus. For the purpose of analysis, the segment of Airway Road between La Media and Sanyo Avenue was assumed to have the capacity of a two-lane Collector Road. The segment between Sanyo Avenue and Michael Faraday Drive was assumed to have a capacity of a Major Arterial. The segment between Michael Faraday Drive and Enrico Fermi Drive was assumed to have the capacity of a Light Collector. Airway Road has the ultimate classification as a four-lane Major Road.

Siempre Viva Road is located within the jurisdiction of the City of San Diego. From west of Interim SR-905 (Otay Mesa Road) to Paseo de las Americas, Siempre Viva Road is a six-lane

facility with a cross-section equivalent to that of a Prime Arterial. East of Paseo de las Americas to Enrico Fermi Drive, Siempre Viva Road is a four-lane road with a cross-section equivalent to that of a Collector road. The segment of Siempre Viva Road between Enrico Fermi Drive and Airway Place was assumed to have the capacity equivalent to that of a Light Collector. This segment of Siempre Viva Road is planned as a six-lane facility with a cross-section equivalent to that of a Prime Arterial.

Harvest Road is a north-south roadway that is under the jurisdiction of the County of San Diego. Currently, Harvest Road is a two-lane dirt road with an ultimate classification of four-lane Specific Plan Road.

Sanyo Avenue is a north-south facility that is currently constructed as a four-lane, undivided roadway between Otay Mesa Road (Old Otay Mesa Road) and Airway Road. The roadway segment of Sanyo Avenue between Otay Mesa Road (Old Otay Mesa Road) and Airway Road is under the City's jurisdiction and has the classification of a four-lane Collector.

Paseo de las Americas is a north-south facility that is currently constructed as a four-lane, undivided roadway between Airway Road and Siempre Viva Road. The segment of Paseo de las Americas between Airway Road and Siempre Viva Road is under the City's jurisdiction and has a classification of a four-lane Collector.

Arterial Segment

Interim State Route 905 (SR-905)/Otay Mesa Road (SC-1120) is an east-west, six-lane expressway which extends from Interstate 5 to the City of San Diego Otay Mesa Community. Approximately one mile east of Interstate 805, there is a break in the route and Interim SR-905 becomes Otay Mesa Road.

This study refers the segment of SR-905/Otay Mesa Road from Heritage Road to SR-125 (Old Otay Mesa Road) as Interim SR-905 (Otay Mesa Road) and the segment from SR-125 (Old Otay Mesa Road) to Siempre Viva Road as SR-905 under existing conditions. It is at the junction with SR-125 that SR-905 and Otay Mesa Road split from one another. Otay Mesa Road continues traveling in the east-west direction, while SR-905 becomes a north-south roadway.

Interim SR-905 (Otay Mesa Road) is improved to six-lane Prime Arterial standards from west of Caliente Avenue to approximately 1,000 feet east of La Media Road. From just east of La Media Road to the international border, Otay Mesa Road (SR-905) is a four-lane Major Arterial.

Freeway Segments

SR-125 opened in late 2007, and extends from Interim SR-905 to SR-54 near the Sweetwater Reservoir. SR-125 is a four-lane highway, of which, the southerly 9.5 miles is operated as a toll road.

SR-905 has been constructed to six lanes between Heritage Road and La Media Road. From La Media Road to Siempre Viva Road, Otay Mesa Road is presently serving as Interim SR 905 and is four lanes.

Intersections

Based on the County and City of San Diego criteria, the following intersections are located within the existing conditions study area and are studied in the impact analysis section.

County of San Diego

- Interim SR-905/ Piper Ranch Road (signalized)
- Otay Mesa Road/ SR-125 SB (signalized)
- Otay Mesa Road/ SR-125 NB (signalized)
- Otay Mesa Road / SR-905 Connector (signalized)
- Otay Mesa Road / Harvest Road (two-way, stop-controlled)
- Otay Mesa Road /Sanyo Avenue (signalized)
- Airway Road /Paseo de las Americas (one-way, stop controlled)

City of San Diego

- Interim SR-905 /Britannia Boulevard (signalized)
- Interim SR-905 / La Media Road (signalized)
- Airway Road / Sanyo Avenue (all-way, stop controlled)
- SR-905 SB Ramp /EB Siempre Viva Road (signalized)
- SR-905 SB Ramp / WB Siempre Viva Road (one-way, stop controlled)
- SR-905 NB Ramp /Siempre Viva Road (signalized)
- Siempre Viva Road /Paseo de las Americas (signalized)

Existing Traffic Volumes and Operations

This section is based on 24-hour counts taken on key roadways during typical weekdays in February and March of 2008. It should be noted that Caltrans recently restricted the westbound left- and eastbound right-turn movements at the Otay Mesa Road/SR-905 connector intersection (August 2009). Thus, the intersection volumes collected in the field were manually adjusted to reflect this restriction. Refer to Appendix B.1 for more information.

Roadway Segments

Table 2.1-1, *Existing Plus Project Conditions Roadway and Freeway Segment Daily LOS Summary*, summarizes the LOS observed for study roadway segments under existing conditions. As shown in Table 2.1-1, no roadway segment operates at unacceptable LOS under existing conditions.

Arterial Roadway Segments

A review of the 24-hour count sheets for Otay Mesa Road found that the traffic flow is constant, and does not have standard peak hour flows. This is likely due to the 24-hour border crossing nearby and the nature of the industrial/commercial traffic in the area. Since level of service based on daily volumes assumes significant increases in traffic counts during the peak hour periods, daily capacity analysis is not particularly accurate for Interim SR-905 between Britannia Boulevard and SR-125. Therefore, Interim SR-905 was analyzed based on the Highway Capacity Manual's (HCM) Arterial Segment Methodology that determines level of service based on the average travel speeds that occur on the roadway. The results of the analysis are summarized in Table 2.1-2, *Existing Plus Project Conditions Arterial LOS Summary*. As shown in the table, all segments of Interim SR-905 in the study area operate at acceptable levels under the existing conditions using the HCM methodology.

Freeway Segments

Table 2.1-1 summarizes the LOS observed for study freeway segments under existing conditions. As shown in Table 2.1-1, the following freeway segment operates at unacceptable LOS under existing conditions:

- Interim SR-905 between Old Otay Mesa Road and Siempre Viva Road (LOS E) (Jurisdiction: City/Caltrans).

Signalized Intersections

As illustrated in Table 2.1-3, *Existing Plus Project Conditions Intersection LOS Summary (Syncro Analysis)*, all signalized intersections in the study area operate at LOS D or better under existing conditions.

Table 2.1-4, *Existing Plus Project Conditions Intersection Traffic Flow Summary (ILV* [Intersecting Lane Vehicles] *Analysis)*, summarizes the existing intersection conditions using the ILV analysis. As shown in the table, all state-owned signalized intersections currently operate under stable flow conditions during the AM and PM peak hours. Since the upper limits of the ILV analysis is based on the premise of an operating condition of LOS C or better and LOS D was considered an acceptable LOS, the ILV analysis was not utilized to determine significance. ILV analysis is only required for Caltrans facilities and only applies to signalized intersections. This ILV analysis is only included for Caltrans informational purposes and is not used to determine project impacts.

Unsignalized Intersections

All unsignalized intersections in the study area operate at LOS D or better under existing conditions (Table 2.1-3).

2.1.2 Analysis of Project Effects and Determination as to Significance

Because the project is located at the boundary of the City and County of San Diego, the analysis of traffic impacts utilizes the significance guidelines developed by the jurisdiction within which the roadway segments or intersections occur. Significance thresholds used by Caltrans are applied to Caltrans facilities.

For analysis purposes, letters are assigned to the various proposed driveways into the project. Driveways A, B and D connect to Harvest Road. Driveway D is the most northerly and would serve delivery vehicles. Driveway B would be located south of Driveway D. Driveway A would be located south of Driveway B and is expected to be the primary access point for the project. Driveway C would be located on Otay Mesa Road between SR-125 and Harvest Road; it would be limited to right-turn in and out access.

2.1.2.1 *Project Trip Generation*

Since the proposed project is located adjacent to the City of San Diego's boundary and the majority of the project traffic would be distributed within the City of San Diego, the trip generation rates provided in the City of San Diego's Trip Generation Manual (Revised May 2003) were utilized. Per the City's Trip Generation Manual, the project falls in between the Regional Shopping Center and the Community Shopping Center definitions. To provide a worst-case traffic analysis, the Community Shopping Center was used. For technical analysis purposes, an average trip generation rate of 70 trips per thousand square feet of commercial was used for the commercial driveway rate and 49 trips per thousand square feet of commercial was used for the commercial cumulative rate. The driveway trip rate includes the total trips generated by the project, while the commercial cumulative rate includes the new vehicle trips that are added to the community and takes into account that some of the traffic attracted to the project site is already traveling through the area for a different purpose (e.g., pass-by trips).

Based on the driveway trip rates, the proposed project is estimated to generate 22,785 average daily trips, (684 morning peak hour trips and 2,279 afternoon peak hour trips). Utilizing a cumulative trip rate (aka pass-by trip rate), the cumulative trip generation of the project is estimated to generate 15,950 average daily trips (479 morning peak hour trips and 1,595 afternoon peak hour trips). The driveway volumes were utilized for analysis of roadway segments and intersections that provide direct access to the project site. The cumulative volumes were utilized for analysis of all other roadway segments and intersections included in the study area that are not adjacent to the project site.

2.1.2.2 *Project Traffic Distribution and Assignment*

The trip distribution for the project site is based on a Retail Site Selection Analysis and Market Study for the proposed project (CBRE 2006). The trade area for the proposed project was determined to be influenced by the population in the surrounding area both in the United States and south of the border in Mexico, as well as by the availability of transportation infrastructure providing access to the proposed development. Under the existing and Year 2015 conditions, without the completion of SR-905, approximately 70 percent of the customer base is expected

from cross-border traffic from Mexico, with approximately 20 percent from the north traveling on SR-125, and approximately 10 percent from development to the west. Under the Year 2030, with the completion of SR-905 and additional residential development to the west of SR-125, customer base is anticipated to be approximately 50 percent from cross-border traffic from Mexico, approximately 20 percent from the north traveling on SR-125, and approximately 30 percent from development to the west.

2.1.2.3 *Proposed Circulation System Improvements*

As part of the development of the project, the Project Applicant would provide improvements to Otay Mesa Road between SR-125 northbound ramps and Harvest Road, and Harvest Road between Otay Mesa Road and Driveway A. Specifically, the project includes the following Otay Mesa Road improvements: two eastbound through lanes, a raised median, three westbound through lanes, two eastbound left-turn lanes at Harvest Road, a traffic signal at the Otay Mesa Road/Harvest Road intersection, one westbound right-turn lane at Driveway C, and two westbound right-turn lanes at the SR-125 northbound ramps. The Project Applicant would also complete Harvest Road frontage improvements, which include two travel lanes in each direction, a painted median, and dual northbound left-turn lanes and a signal at Driveway A, and one northbound left-turn lane, one northbound through lane, painted median and two southbound through lanes at Driveway B.

2.1.2.4 *Roadway Segments*

Guidelines for the Determination of Significance

Because the project is located at the boundary of the City and County of San Diego, the analysis of traffic impacts utilizes the significance guidelines developed by the jurisdiction within which the roadway segments or intersections occur. The County guidelines are based on the County of San Diego Guidelines for Determining Significance, Transportation and Traffic, Modification February 19, 2010. The City thresholds are based on the City of San Diego Significance Determination Thresholds, dated January 2007.

County of San Diego

Within the County of San Diego's jurisdiction, the proposed project would result in significant direct or cumulative impacts related to traffic circulation if it would:

1. Cause on-site County Circulation Element Roads to operate below LOS C during peak traffic hours.
2. Significantly increase congestion on a Circulation Element Road or State Highway currently operating at LOS E or LOS F, or will cause a County Circulation Element Road or State Highway to operate at a LOS E or LOS F as a result of the proposed project, as identified in Guideline Matrix 1, or the additional or redistributed ADT generated by the proposed project would cause a residential street to exceed its design capacity.

Guideline Matrix 1 Allowable Average Daily Traffic Increases on Congested Road Segments			
LOS	**2-Lane Road**	**4-Lane Road**	**6-Lane Road**
E	200 ADT	400 ADT	600 ADT
F	100 ADT	200 ADT	300 ADT

Notes:
By adding proposed project trips to all other trips from a list of projects, these same tables are used to determine if total cumulative impacts are significant. If cumulative impacts are found to be significant, each project that contributes any trips must mitigate a share of the cumulative impacts.
The County may also determine impacts have occurred on roads even when a project's traffic or cumulative impacts do not trigger an unacceptable LOS, when such traffic uses a significant amount of remaining road capacity.

Source: County of San Diego, Guidelines for Determining Significance - Transportation and Traffic 2010.

Projects that generate over 2,400 ADT or 200 peak hour trips must comply with the traffic study requirements of SANDAG's Congestion Management Plan (CMP). Trip distributions for these projects must also use the current regional computer traffic model. Projects that must prepare a CMP analysis should also follow the CMP traffic impact analysis guidelines. These guidelines are summarized in Table 2.1-5, *County Traffic Guidelines*. See Section 2.1.3.3 for this analysis.

City of San Diego

Within the City of San Diego's jurisdiction, the proposed project would result in significant direct or cumulative impacts related to traffic circulation if it would:

1. Cause an intersection, roadway segment, or freeway segment operating at LOS E or LOS F, under either direct or cumulative conditions, to exceed the thresholds identified in Table 2.1-6, *City of San Diego Traffic Thresholds*.

Analysis

Roadway Segments (Guidelines 1, 2, and 3)

The anticipated LOS for roadway segments is illustrated in Table 2.1-1, with and without project traffic. As illustrated in Table 2.1-1, the proposed project would not add a significant amount of traffic to any roadway segment. **Therefore, the impact of the proposed project on roadway segments in the existing plus project condition would be less than significant.**

2.1.2.5 *Arterial Segments*

Guidelines for the Determination of Significance

The roadway segment guidelines listed in Guideline Matrix 1 are based on traditional traffic flow conditions where distinct peak hours occur in the morning and afternoon due to high commuter volumes. In the case of Interim SR-905 (Otay Mesa Road), this assumption is not representative of the actual traffic conditions characteristic of this roadway. A review of the 24-hour count sheet for the affected segments of Interim SR-905 (Otay Mesa Road) indicated that the traffic flow is rather constant throughout the day. Further, it should be noted that the Otay Mesa POE is open 24 hours a day for passenger vehicles with long lines crossing the border, which also

spreads vehicles out through the day. The Otay Mesa POE hours for commercial traffic are 6 a.m. to 10:00 p.m.

In response to the unique traffic condition on Interim SR-905 (Otay Mesa Road), the traffic analysis evaluated the traffic flow using the Highway Capacity Manual's (HCM) Arterial Segment Methodology utilizing the Synchro software. Based on this approach, a project would have a significant impact if it would:

1. Cause a decrease in travel speed by more than one mile per hour (mph) on an arterial segment already operating at LOS E or F.

Analysis

Arterial Segments (Guideline 1)

The anticipated LOS for arterial segments is illustrated in Table 2.1-2, with and without project traffic. As illustrated in Table 2.1-2, no arterial segments would be impacted by the project based on the HCM methodology. **Therefore, the proposed project impacts on arterial segments in the existing plus project condition would be less than significant.**

2.1.2.6 *Freeways*

Guidelines for the Determination of Significance

Significance thresholds used by Caltrans are applied to Caltrans facilities. On freeways within the Caltrans' jurisdiction, the proposed project would result in significant direct or cumulative impacts related to traffic circulation if it would:

1. Increase the LOS such that it would be unable to maintain a target LOS at the transition between LOS C and LOS D.

Analysis

Freeway Segments (Guideline 1)

The anticipated LOS for freeway segments is illustrated in Table 2.1-1, with and without project traffic. As illustrated in Table 2.1-1, the proposed project would cause one freeway segment already operating at unacceptable LOS E to drop to LOS F. **This project would have a significant impact to the following freeway segment in the existing plus project condition**:

- **Interim SR-905 between Otay Mesa Road and Siempre Viva Road (Impact TR-1) (Jurisdiction: City/Caltrans).**

2.1.2.7 *Signalized Intersection*

Guidelines for the Determination of Significance

Because the project is located at the boundary of the City and County of San Diego, the analysis of traffic impacts utilizes the significance guidelines developed by the jurisdiction within which the roadway segments or intersections occur. The County guidelines are based on the County of San Diego Guidelines for Determining Significance, Transportation and Traffic, dated February 19, 2010. The City thresholds are based on the City of San Diego Significance Determination Thresholds, dated January 2007.

County of San Diego

The proposed project would result in a significant impact to signalized intersections if it would:

1. Significantly increase congestion on a signalized intersection currently operating at LOS E or LOS F, or would cause a signalized intersection to operate at a LOS E or LOS F, as identified in Guideline Matrix 2.

Guideline Matrix 2
Allowable Increases in Vehicle Trips Entering Congested Intersections

LOS	Signalized	Unsignalized
E	Delay of 2 seconds or less	20 or less peak hour trips on a critical movement
F	Delay of 1 second, or 5 peak hour trips or less on a critical movement	5 or less peak hour trips on a critical movement

Notes:
-A critical movement is an intersection movement that experiences excessive queues, which typically operates at LOS F. Also, if a project adds significant volume to a minor roadway approach, a gap study should be provided that details the headways between vehicles on the major roadway.
-By adding proposed project trips to all other trips from a list of projects, these same tables are used to determine whether total cumulative impacts are significant. If cumulative impacts are found to be significant, each project that contributes additional trips must mitigate a share of the cumulative impacts.
-The County may also determine impacts have occurred on a road even when a project's traffic or cumulative impacts do not trigger an unacceptable level of service, when such traffic uses a significant amount of remaining road capacity.
-For determining significance at signalized intersection with LOS F conditions, the analysis must evaluate both the delay and the number of trips on a critical movement, exceedance of either criteria result in a significant impact.

Source: County of San Diego, Guidelines for Determining Significance for Transportation and Traffic 2010.

City of San Diego

Within the City of San Diego's jurisdiction, the proposed project would result in significant direct or cumulative impacts related to traffic circulation if it would:

2. Cause an intersection, roadway segment, or freeway segment operating at LOS E or LOS F, under either direct or cumulative conditions, to exceed the thresholds identified in Table 2.1-6.

Analysis

Signalized Intersections (Guidelines 1 and 2)

The anticipated LOS at signalized intersection intersections is illustrated in Table 2.1-3, with and without project traffic, during the AM and PM peak hours. As illustrated in Table 2.1-3, the project would significantly decrease the LOS at one intersection. **Thus, the addition of project traffic would have a significant, direct impact on the following signalized intersection:**

- **Otay Mesa Road/Harvest Road (PM) (Impact TR-2) (Jurisdiction: City/County).**

It is noted that the Otay Mesa Road/Harvest Road intersection is not signalized under the existing conditions, but would be signalized under the existing plus project conditions. The project proposes signalization of this intersection.

Per the ILV analysis shown in Table 2.1-4, all the intersections analyzed by this method operate under stable flow during the AM and PM peak hours under existing without and with project conditions. ILV analysis is only included for Caltrans informational purposes and is not used to determine project impacts.

2.1.2.8 *Unsignalized Intersection*

Guidelines for the Determination of Significance

Because the project is located at the boundary of the City and County of San Diego, the analysis of traffic impacts utilizes the significance guidelines developed by the jurisdiction within which the roadway segments or intersections occur. The County guidelines are based on the County of San Diego Guidelines for Determining Significance, Transportation and Traffic (revised February 19, 2010). The City thresholds are based on the City of San Diego Significance Determination Thresholds (January 2007).

County of San Diego

Within the County of San Diego's jurisdiction, the proposed project would result in significant direct or cumulative impacts related to traffic circulation if it would:

1. a. Add 21 or more peak hour trips to a critical movement of an unsignalized intersection, and cause an unsignalized intersection to operate below LOS D, or
   b. Add 21 or more peak hour trips to a critical movement of an unsignalized intersection currently operating at LOS E, or
2. a. Add 6 or more peak hour trips to a critical movement of an unsignalized intersection, and cause the unsignalized intersection to operate at LOS F, or
   b. Add 6 or more peak hour trips to a critical movement of an unsignalized intersection currently operating at LOS F.

City of San Diego

Within the City of San Diego's jurisdiction, the proposed project would result in significant direct or cumulative impacts related to traffic circulation if it would:

2. Cause an intersection, roadway segment, or freeway segment operating at LOS E or LOS F, under either direct or cumulative conditions, to exceed the thresholds identified in Table 2.1-5.

Analysis

Unsignalized Intersections (Guidelines 1 and 2)

The anticipated LOS at unsignalized intersections is illustrated in Table 2.1-3, with and without project traffic, during the AM and PM peak hours. As illustrated in Table 2.1-3, all but one intersection would operate at acceptable levels of service in the AM and PM peak hours. The proposed project would add a significant amount of trips to the intersection operating at unacceptable LOS. **Therefore, the proposed project would have a significant impact on the following unsignalized intersection in the existing plus project condition:**

- **Airway Road/Sanyo Avenue (PM) (Impact TR-3) (Jurisdiction: City).**

2.1.2.9 *Site Access*

Guidelines for the Determination of Significance

Since site access is located within the County of San Diego, the County of San Diego Guidelines for Determining Significance, Transportation and Traffic, (revised February 19, 2010) were used to determine significance. Thus, the proposed project would result in significant direct or cumulative impacts related to traffic circulation if:

1. Based upon an evaluation of existing accident rates, the signal priority list, intersection geometrics, proximity of adjacent driveways, sight distance or other factors, the project would significantly impact the operations of an intersection.

Analysis

Site Access (Guideline 1)

The project proposes a right-in, right-out only driveway on Otay Mesa Road (Driveway C); a signalized driveway on Harvest Road (Driveway A); an unsignalized driveway on Harvest Road (Driveway B); and a right-in, right-out service driveway on Harvest Road (Driveway D). While under Caltrans control, access at Driveway C will not be permitted until after the Interim SR-905 Connection at Otay Mesa Road has been removed and access rights have been relinquished to the County of San Diego (estimated to be mid 2011).

All site access points were determined to operate at acceptable levels under the existing plus proposed project condition (Table 2.1-7, *Existing Plus Project and Cumulative (2020) Plus Project Site Access Intersection LOS Summary*). In addition, the traffic study found that signalization Driveway B along Harvest Road is not necessary to provide adequate access under the existing conditions. Thus, no signalization would be provided at this intersection. It concluded that left-turn lanes at Driveways A and B would not be required until the daily left-turn volumes exceeds 300 vehicles and/or there is a LOS or safety concern.

A queuing analysis was also completed as a part of the traffic study to address turn-lane storage lengths. Since the PM peak hour represented the highest peak hour demand or traffic entering and exiting the project site, the queuing analysis was conducted for the PM peak hour. As shown in Table 2.1-8, *Existing Plus Project and Cumulative (2020) Plus Project Site Access Queuing Summary*, under existing plus project conditions, queue lengths exceed the storage lengths at the following locations:

Otay Mesa Road/Harvest Road

- Southbound shared left-through lane
- Two southbound right-turn lanes

Harvest Road/Driveway A

- Eastbound shared left-right lane
- Eastbound right-turn lane

The average Otay Mesa Road/Harvest Road southbound left-turn lane queue would be approximately three vehicles over the queue length. The average Otay Mesa Road/Harvest Road southbound right-turn lane queues would be approximately three vehicles over the queue length.

At the Harvest Road/Driveway "A," the eastbound movement that would cause queues to exceed capacity would be located within the shopping center and would not affect traffic on local arterials.

Queuing lengths may exceed the storage capacity of left-turn lanes on Harvest Road. This conclusion is based on the worst-case analysis, and does not include implementing signal timing plans at the project's signal, north of Otay Mesa Road, to regulate southbound traffic on Harvest Road. Also, the analysis does not include the additional widening on the east side of Harvest Road as part of the Sunroad project frontage. The installation of the traffic signals at Otay Mesa Road/Harvest Road and Harvest Road/Driveway 'A' would include signal interconnect and timing plans to regulate traffic on southbound Harvest Road to control queues that would create safety hazards. **Thus, project access is considered to be adequate and impacts related to access would be less than significant.**

2.1.2.10 *Traffic Hazards*

Guidelines for the Determination of Significance

Because the project is located at the boundary of the City and County of San Diego, the analysis of traffic impacts utilizes the significance guidelines developed by the jurisdiction within which the roadway segments or intersections occur. The County guidelines are based on the County of San Diego Guidelines for Determining Significance, Transportation and Traffic (revised February 19, 2010). The City thresholds are based on the City of San Diego Significance Determination Thresholds (January 2007).

County of San Diego

The proposed project would result in significant impacts related to traffic hazards if it would:

1. Create a significant traffic hazard impact due to a design feature that would:
    a. Have design features/physical configurations of access roads that would adversely affect the safe transport of vehicles along the roadway.
    b. Result in a percentage or magnitude of increased traffic on the road that would affect the safety of the roadway.
    c. Result in physical conditions of the project site and surrounding area, such as curves, slopes, walls, landscaping or other barriers that could result in vehicle conflicts with other vehicles and/or stationary objects.
    d. Not conform to the requirements of the private or public road standards, as applicable.
2. Create a significant hazard to pedestrians and/or bicyclist due to a design feature that would:
    a. Have design/physical configurations on a road segment or at an intersection that would adversely affect the visibility of pedestrians and/or bicyclists to drivers entering and exiting the site, and the visibility of cars to pedestrians and bicyclists.
    b. Result in an amount of pedestrian activity at the proposed project access points that may adversely affect pedestrian safety.
    c. Result in the preclusion or substantial hindrance of the provision of a planned bike lane or pedestrian facility on a roadway adjacent to the project site.
    d. Result in a percentage and/or magnitude of increased traffic on the road due to the proposed project that may adversely affect pedestrian and bicycle safety.
    e. Result in physical conditions on the project site and surrounding area, such as curves, slopes, walls, landscaping or other barriers that could result in vehicle/pedestrian, vehicle/bicycle conflicts.
    f. Not conform to the requirements of the private or public road standards, as applicable.
    g. Result in a substantial increase in pedestrian or bicycle activity without the presence of adequate facilities.

City of San Diego

The proposed project would result in significant impacts related to traffic hazards if it would:

3. Cause a traffic hazard to motor vehicles, bicyclists, or pedestrians due to proposed non-standard design features (e.g., poor sight distance, proposed driveway onto an access-restricted roadway).

Analysis

Traffic Hazards (Guidelines 1, 2, and 3)

The proposed project would take access directly off Otay Mesa Road, to the south, and Harvest Road, to the east. A right-in, right-out-only driveway would be provided on Otay Mesa Road, 310 feet west of Harvest Road (Driveway C). A signalized driveway on Harvest Road, located 591 feet north of Otay Mesa Road, (Driveway A) would be installed. An unsignalized driveway on Harvest Road would be located 1,038 feet north of Otay Mesa Road (Driveway B). A left-in, right-out service driveway on Harvest Road would be created 1,279 feet north of Otay Mesa Road (Driveway D). The Otay Mesa Road Driveway C would not open until the SR-905 temporary off-ramp is eliminated by the SR-905 Phase 1A. The proposed project also includes improving the project's Harvest Road frontage to provide an interim four-lane roadway with a painted median. The interim improvements are designed to allow widening on the east side of Harvest Road in the future, as adjacent property is developed. For more information, refer to the interim striping plan in Appendix L (Page L-14) of the Traffic Study (Darnell 2010, Appendix B.1). .

Roadway improvements would be constructed to County road standards, with the exception of the proposed driveways on Harvest Road. The proposed driveways on Harvest Road are closer together than County standards allow and the project is seeking design exceptions. Due to the close spacing of the driveways and lack of need for signalization, signalization is not recommended or proposed for the middle driveway on Harvest Road and stop-control is suggested by the traffic report. Thus, this intersection would not be signalized.

As determined in the site access analysis above (Section 2.1.2.9), the proposed entrance configurations would cause queuing that exceeds the queuing capacity length but this analysis is a worst-case analysis that does not include timing plans or Sunroad's frontage improvements. The installation of the traffic signals at Otay Mesa Road/Harvest Road and Harvest Road/Driveway 'A' would include signal interconnect and timing plans to regulate traffic on southbound Harvest Road to not create queues that would create safety hazards. Also, the project access analysis shows no significant access impacts would result from the project. In addition, a sight distance analysis determined the project would include adequate sight distance at all four proposed driveways, in accordance with County requirements (PDC 2007).

Improvements would be constructed to maintain and enhance existing conditions and would not include any curves or barriers that lead to traffic safety issues. The project does not propose any hazards or barriers for pedestrians or bicyclists on adjacent roadways. Bike lanes would not be provided along the Otay Mesa Road frontage, in compliance with the County's guidelines.

Sidewalks would also be provided at the perimeter of the site along Harvest Road and Otay Mesa Road. **Thus, impacts related to traffic hazards would be less than significant**.

2.1.2.11 *Parking Capacity*

Guidelines for the Determination of Significance

Project parking is located within the County of San Diego. Therefore, the County of San Diego Guidelines for Determining Significance, Transportation and Traffic (revised February 19, 2010) were used to determine significance.

The proposed project would result in a significant parking impact if it would:

1. Fail to demonstrate compliance with the standards set forth by the County of San Diego Zoning Ordinance (Sections 6750-6799) and the County of San Diego Off-Street Parking Design Manual.

Analysis

Parking Capacity (Guideline 1)

Per the County Parking Schedule, the parking requirement for commercial uses above 250,000 square feet is 4.0 parking spaces per 1,000 square feet of gross floor area, or 1 parking space per 250 square feet of gross floor area. Considering that the project includes 325,502 square feet of gross floor area, the required parking for the site is 1,302 spaces. The proposed project would provide 1,453 parking spaces which would exceed the parking requirement. **Therefore, the proposed project would have a less than significant parking impact.**

2.1.2.12 *Alternative Transportation*

Guidelines for the Determination of Significance

The City of San Diego does not include a significance threshold regarding alternative transportation. Therefore, the County of San Diego Guidelines for Determining Significance, Transportation and Traffic (revised February 19, 2010) and the East Otay Mesa Specific Plan were used to determine significance.

1. The proposed project would result in a significant impact if it would not conform to the following alternative transportation policies under Objective Four of the County's General Plan Public Facilities Element:
   - Policy 4.1: The use of alternate forms of transportation such as public transit and car/van pools will be supported and encouraged to reduce both roadway congestion and pollution.
   - Policy 4.2: The County will ensure the development of its bikeway system and encourage its use.

- Policy 4.3: Consider the need for transit improvements in Large Scale Projects.
- Policy 4.4: Ensure the provision of bicycle facilities and other needed bikeway related improvements in new development.

2. The proposed project would result in a significant impact if it would not conform to the following alternative transportation policies under the East Otay Mesa Specific Plan:
   - Policy LU-3: The Commercial Center (commercial overlay) shall allow for transit-oriented land uses, encouraging pedestrian circulation.
   - Policy LU-6: Coordinate vehicular and pedestrian circulation between adjacent commercial properties.
   - Policy C-8: Promote connections between transit stops and employment destinations in East Otay Mesa.
   - Policy C-11: Promote pedestrian circulation in East Otay Mesa.

Analysis

Alternative Transportation (Guidelines 1 and 2)

The proposed project includes 131 bike stalls and provides 18 preferred parking stalls for vanpools/carpools that would promote alternative forms of transportation. Although MTS does not currently have a bus route planned in the vicinity of the project site, the project would provide adequate road right-of-way, lane widths, and sidewalks such that a bus stop could be added as a public project in the future. The nearest planned bicycle route will follow Sunroad Boulevard, just northeast of the project site, in order to avoid traffic and safety issues on Otay Mesa Road. The proposed project is a commercial development with internal pedestrian walkways for circulation. Finally, the project is the only commercial development project planned in this area at this time, but pedestrian connections will be encouraged among the project, future commercial development, employment centers, and transit stops proposed in the future through the County's implementation of the above policies as the specific plan area develops. **As the project would be in compliance with the County's alternative transportation policies, the proposed project would have a less than significant impact on alternative transportation.**

2.1.3 Cumulative Impact Analysis

2.1.3.1 *Near-term Cumulative Project Traffic (Year 2020)*

The cumulative analysis in the near-term condition (Year 2020) is based on future growth estimates developed through the *Addendum to Real Estate Market Analysis* (Economics Research Associates 2006). This method was used instead of the typical cumulative project list method since, in this instance, the list method would overestimate the development that would be fully operational in year 2020. This is due to the fact that many of the projects in the area require additional subdivision and permits before construction can occur. Thus, the reasonably expected amount of year 2020 development was estimated by taking the total industrial acreage forecast for the unincorporated County portion of the East Otay Mesa area between 2006 and 2020, based

on the high scenario growth rate (or 135 acres), divided by the total acreage of industrial subdivisions proposed in the County (or 1,068 acres).

As illustrated in Table 2.1-9, *Year 2020 Cumulative Trip Generation,* 155,932 ADT are estimated to be generated by 17 cumulative project developments in the Year 2020. These trips were assigned to the anticipated roadway network in 2020. A SANDAG model was used to determine the impact of the proposed project in combination with the cumulative project traffic on LOS in the near-term scenario.

There are several planned improvements that are expected to be in place by Year 2020. These roadways are assumed to be completed prior to 2020 because they would be required to provide access to the cumulative projects. The development of several of the approved/pending projects listed in Table 2.1-9, *Cumulative (2020) Trip Generation*, would also result in the construction/ modifications of existing intersections or roadway improvements in order to provide access to the project site. It is reasonable to assume the completion of the intersections modifications and roadway improvements because the cumulative projects associated with the improvements could not open without the completion of the assumed improvements. Since all the cumulative projects were assumed to be constructed by the year 2020, the following new roadway facilities and intersection modifications within the County of San Diego were assumed to be constructed under the cumulative conditions. The roadway conditions listed here are based on the pending projects constructing facilities required for their development.

Roadway Segments

Old Otay Mesa Road, between Alta Road and Lone Star Road (aka Paseo De La Fuente; currently a dirt road), was assumed to be built to the standards of a Light Collector as a result of the Vulcan Materials and Otay Crossing Commerce Park projects. Otay Mesa Road, between Harvest Road and Sanyo Avenue, was assumed to be built to the standards of a four-lane Major Arterial by Caltrans.

Airway Road, between Airway Place and Siempre Viva Road (currently does not exist), was assumed to be built to the standards of a Light Collector by the Otay Business Park project to provide access.

Siempre Viva Road, between the California Highway Patrol entrance east of Enrico Fermi Drive and Airway Place (currently only provides two westbound travel lanes), was assumed to be improved to the standards of a Light Collector Road for access to Otay Business Park.

Siempre Viva Road, between Airway Place and Lone Star Road (currently does not exist), was assumed to be built to the standards of a Light Collector Road for access to Otay Business Park.

Harvest Road, between Old Otay Mesa Road and Sunroad Boulevard (currently a dirt road) was assumed to be built to the standards of a Modified four-lane Industrial/Commercial Collector with painted median and turn lanes at intersections to provide access to California Crossings and Otay Tech Centre.

Intersections

Otay Mesa Road (SR-905)/Piper Ranch Road intersection was assumed to be constructed as a four-way intersection to provide access to the Interstate Industrial Centre and Sunroad Otay Park projects.

Old Otay Mesa Road/Sanyo Avenue-Sunroad Boulevard intersection was assumed to be constructed as a four-way intersection to provide access to the Otay Tech Centre [Sunroad] project.

Old Otay Mesa Road/Vann Centre Boulevard intersection was assumed to be constructed as a "T" intersection to provide access to the Otay Tech Centre [Sunroad] and International Industrial Park projects.

Old Otay Mesa Road/Enrico Fermi Drive intersection was assumed to be constructed as a four-way intersection to provide access to the International Industrial Park project.

Alta Road/ Lone Star Road (aka Paseo de la Fuente) intersection was assumed to be constructed as a four-way intersection to provide access to the International Industrial Park project.

Old Otay Mesa Road/Harvest Road intersection was assumed to be signalized to provide adequate access to the California Crossings project.

Freeway Segments

Caltrans is the responsible party for the following freeway segment improvements which were assumed as part of the Year 2020 analysis:

SR-125 was completed and opened to traffic in November 2007. Ultimately, carpool lanes and/or transit facilities are expected to be constructed within the median.

SR-905 from the East Otay Mesa Point of Entry (POE) to I-805 (referred to as Phase 1) was assumed to be completed by the spring of 2012. Construction of the remaining portion of SR-905 was assumed to occur over four phases. The first phase is further divided into a Phase 1A and 1B.

Until Airway Road, between the SR-905 and Sanyo Avenue, is opened on January 5, 2011, a detour is in place to re-route traffic via Sanyo Avenue and Otay Mesa Road (Old Otay Mesa Road). As mitigation for the detour, Caltrans signalized the Otay Mesa Road/Sanyo Avenue intersection and improved the roadway segment of Otay Mesa Road, between Harvest Road and Sanyo Avenue, to the standards of a four-lane Major Road and the segment of Sanyo Avenue between Otay Mesa Road and Airway Road to the standards equivalent to that of a four-lane Collector.

Phase 1A will consist of a six-lane facility between Britannia Boulevard and the Otay Mesa Port of Entry. This segment will include a full signalized interchange at SR-905/La Media Road and

ramps on the eastern side of Britannia Boulevard. Roadway improvements will be made along Otay Mesa Road, Airway Road, Sanyo Avenue, and Harvest Road. Specifically, Phase 1A will include improving the existing cross-section of the segment of La Media Road between Otay Mesa Road and approximately Saint Andrews Avenue to the equivalent of a four-lane Collector and improving Airway Road from approximately 700 feet west of Harvest Road to approximately 600 feet west of Sanyo Avenue to a four-lane Major Road. Phase 1A is fully funded and construction has commenced and is scheduled to be completed by late 2010. The Interim SR-905 Ramp connection at Otay Mesa Road and the segment of Interim SR-905 between Otay Mesa Road and Airway Road will be removed during this phase of construction.

Phase 1B is also fully funded. Construction commenced in May 2009 and is expected to be completed by summer 2012. The majority of the funding is coming from the American Recovery and Reinvestment Act.

Phase 2 consists of construction of a westbound connector from SR-905 to northbound I-805 and an auxiliary lane along northbound I-805 between SR-905 and Palm Avenue. Widening of the Del Sol Boulevard undercrossing is also included. Phase 2 of the SR-905 including the connection to Interstate 805 has been funded through the Transportation Investment Generating Economic Recovery Grant (TIGER) award. However, the 2020 analysis does not assume this improvement is in place.

Phase 3 consists of construction of the SR-125/SR-905 interchange. Phase 3 is not currently funded and the completion date is unknown. The 2020 analysis does not assume this improvement is in place.

Phase 4 consists of the construction of the SR-905/Heritage Road interchange. Phase 4 is not currently funded and the completion date is unknown. The 2020 analysis does not assume this improvement is in place.

SR-11 will consist of approximately two miles of four-lane freeway from the proposed SR-905/SR-125 junction to the future POE at East Otay Mesa in San Diego County. An initial environmental study for the SR-11 program has been completed and a second study for the project itself is underway, with completion expected in 2010. The current schedule calls for the SR-11 breaking ground in 2012 and opening in 2014, contingent on full funding. The SR-11 facility and the POE at the third border crossing were assumed to be constructed and operational only under the 2030 conditions.

All other roadway, arterial, and freeway segments and intersections were assumed to have the same lane configuration and traffic control as that which currently exists.

2.1.3.2 *Near-term Cumulative Conditions (Year 2020)*

The traffic forecast for cumulative (2020), with SR-905 Phases 1A and 1B, was prepared by SANDAG based on the Series 11 model. The 2020 land use information included in the model was based on the list of approved/pending projects in the County of San Diego, summarized in Table 2.1-9. As mentioned above, the trip generation and distribution for the proposed project was based on a *Retail Site Selection Analysis* (CBRE 2006) rather than a Select Zone distribution

assignment, generated by SANDAG. Also, certain future improvements were assumed to be in place based on the need for access to new development, and the funding/schedule status.

Guidelines for Determining Significance

Because the project is located at the boundary of the City and County of San Diego, the analysis of traffic impacts utilizes the significance guidelines developed by the jurisdiction within which the roadway segments or intersections occur. The County guidelines are based on the County of San Diego Guidelines for Determining Significance, Transportation and Traffic (revised February 19, 2010). The City thresholds are based on the City of San Diego Significance Determination Thresholds (January 2007). Refer to Section 2.1.2 for the significance guidelines.

Analysis

Roadway Segments

As shown in Table 2.1-10, *Cumulative (2020) Plus Project Conditions Roadway and Freeway Segment Daily LOS Summary (Syncro Analysis)*, with the expected buildout and TIF improvements, no roadway segments under the jurisdiction of the City of San Diego and County would be substantially affected by project traffic. All roadway segments would operate at acceptable levels under the Cumulative 2020 Plus Project conditions. **Therefore, the cumulative year 2020 impact of the proposed project on roadway segments would be less than significant.**

Freeway Segments

As shown in Table 2.1-10, no freeway segments would be impacted with the addition of project traffic under the with SR-905 (Phases 1A and 1B) cumulative year 2020 scenario. **Therefore, the cumulative 2020 impact of the proposed project on roadway segments would be less than significant.** It is noted that interim SR-905 segments are addressed as roadway segments under this scenario since it is assumed that SR-905 Phases 1A and 1B are in place.

Signalized Intersections

As shown in Table 2.1-11, *Cumulative (2020) Plus Project Conditions Intersection LOS Summary (Syncro Analysis)*, with the expected buildout and TIF improvements, no signalized intersections would be substantially affected by project traffic. **Therefore, the cumulative year 2020 impact of the proposed project on signalized intersections would be less than significant.**

As shown in Table 2.1-12, *Cumulative (2020) Plus Project Conditions Intersection Traffic Flow Summary (ILV Analysis)*, one state-owned signalized intersection would operate at "unstable flow" conditions during the AM and PM peak hours in the Cumulative Year 2020 Plus Project conditions. This ILV analysis is provided for Caltrans informational purposes only and is not used to determine project impact significance.

Unsignalized Intersections

As shown in Table 2.1-11, the project would add a significant amount of traffic to the following two unsignalized intersections within the jurisdiction of the City of San Diego and City/County that operate at unacceptable LOS under the Cumulative 2020 Plus Project conditions. **Thus, the proposed project would have significant, cumulative impacts on the following unsignalized intersections under the Cumulative 2020 Plus Project conditions:**

- **Airway Road /Sanyo Avenue(AM/PM) (Impact TR-3) (Jurisdiction: City); and**
- **Airway Road /Paseo de las Americas (AM/PM) (Impact TR-4) (Jurisdiction: City/County).**

It is noted that the Airway Road/Sanyo Avenue impact also occurs under the Existing Plus Project conditions, and is considered both a direct and cumulative 2020 project impact.

2.1.3.3 *Year 2030 Cumulative Operations (CMP Analysis)*

For the CMP, at Buildout (Year 2030), the arterial roadway system is planned to be completed, as illustrated in Figure 2.1-1. SR-905 and SR-11 are assumed to be in place.

Roadway Segments

As illustrated in Table 2.1-13, *Cumulative (2030) Plus Project Conditions Roadway and Freeway Segment Daily LOS Summary*, all study area roadway segments are anticipated to operate at an acceptable LOS under the Year 2030 Plus Project conditions. **Thus, the project would have a less than significant impact on roadway segments in the Year 2030.**

Freeways

As illustrated in Table 2.1-13, all freeway segments are anticipated to operate at an acceptable LOS under the Year 2030 Plus Project conditions. **Thus, the project would have a less than significant impacts on freeway segments in the Year 2030.**

Intersections are not addressed in the CMP analysis.

2.1.3.4 *Cumulative Site Access*

Under the cumulative (year 2030) scenario, the site would be accessible from three driveways on Harvest Road and from one driveway on Otay Mesa Road. Two of the driveways on Harvest Road would be signalized. The third, most northerly driveway would be limited to right-in and right-out turning movements. The driveway on Otay Mesa Road would be limited to right-in and right-out turning movements. The proposed project also includes completing half-width improvements of Harvest Road, increasing it from a two-lane dirt roadway to a four-lane major roadway with a median. Adequate sight distance would be included in the proposed project plans, in accordance with County requirements (Project Design Consultants 2007). All site

access points were determined to operate at acceptable levels under the cumulative (year 2030) with SR-905 Phase 1A and 1B condition.

A queuing analysis was also completed as a part of the traffic study to address driveway spacing. Since the PM peak hour represents the highest peak hour demand or traffic entering and exiting the project site, the queuing analysis was conducted for the PM peak hour. At the Otay Mesa Road/Harvest Road intersection, under cumulative year 2030 plus project conditions, the queue length for the southbound shared left-through lane would be exceeded by three vehicles (Table 2.1-8). As discussed in the site access analysis above (Section 2.1.2.9), this queuing study is a worst-case analysis that does not include timing plans or Sunroad's frontage improvements. Also, the project access analysis shows no significant access impacts would result from the project. **Therefore, the proposed design would adequately accommodate the traffic demands and potential queuing impacts would be less than significant.**

2.1.3.5 *Cumulative Traffic Hazards*

As mentioned under the existing conditions analysis, roadway improvements would be constructed to County road standards, with the exception of the proposed driveways on Harvest Road. The proposed driveways on Harvest Road are closer together than County standards allow, and the project is seeking a design exception. Improvements would be constructed to maintain and enhance existing conditions, and would not include any curves or barriers that lead to traffic safety issues. The project would not pose a hazard or barrier since neither Otay Mesa Road nor Harvest Road are designated bike routes. Sidewalks would be provided around the perimeter of the site along Harvest Road and Otay Mesa Road. As mentioned above, queuing in exceedance of the queuing storage capacity would occur. However, this analysis is a worst-case analysis that does not include timing plans or Sunroad's frontage improvements. The installation of the traffic signals at Otay Mesa Road/Harvest Road and Harvest Road/Driveway A would include signal interconnect and timing plans to regulate traffic on southbound Harvest Road to not create queues that would create safety hazards. In addition, a sight distance analysis determined the project would include adequate sight distance at all four proposed driveways, in accordance with County requirements (PDC 2007). **Thus, cumulative impacts related to traffic hazards would be less than significant**.

2.1.3.6 *Cumulative Parking Capacity*

It is assumed that future projects would be required to conform to County or City Parking Standards as a part of future discretionary project review. Per the County of San Diego's Parking Schedule, the parking requirement for commercial use above 250,000 square feet is 4.0 parking spaces per 1,000 square feet of Gross Floor Area (GFA) or one parking space per 250 square feet of GFA. The project includes 1,453 parking spaces; County standards only require 1,302 parking spaces. Therefore, the project would provide adequate on-site parking. Compliance with County and/or City standards for parking requirements would ensure that cumulative parking conditions would be adequate to serve future projects and no shortage of parking would occur. **Therefore, the proposed project's cumulative parking impacts would be less than significant.**

2.1.4 Significance of Impacts Prior to Mitigation

2.1.4.1 *Direct Impacts*

Freeway Segments

TR-1 The proposed project would have a significant, direct impact on Interim SR-905, between Otay Mesa Road and Siempre Viva Road (Jurisdiction: City/Caltrans).

Signalized Intersections

TR-2 The proposed project would have a significant, direct impact on the Otay Mesa Road/Harvest Road intersection (PM) (Jurisdiction: City/County/Caltrans).

Unsignalized Intersections

TR-3 The proposed project would have a significant, direct impact on the Airway Road/Sanyo Avenue intersection (PM) (Jurisdiction: City).

2.1.4.2 Cumulative (Year 2020) Impacts With SR-905 Phases 1A and 1B

Unsignalized Intersections

TR-3 The proposed project would have a significant, cumulative impact on the Airway Road /Sanyo Avenue intersection (AM/PM) (Jurisdiction: City).

TR-4 The proposed project would have a significant, cumulative impact on the Airway Road /Paseo de las Americas intersection (AM/PM) (Jurisdiction: City/County).

2.1.4.3 Cumulative (Year 2030) Impacts

No significant traffic impacts would occur in the year 2030 condition.

2.1.5 Mitigation

Roadway improvements which would reduce the impacts of the proposed project are identified in Table 2.1-14, *Summary of Significant Impacts and Mitigation Measures*. A notation follows those mitigation measures that are considered infeasible to guarantee completion since they are outside the jurisdiction of the County of San Diego. See Section 2.1.6, Conclusion, for additional information.

Mitigation for Direct Project Impacts

M-TR-1: Prior to issuance of building permits, Phase 1A of SR-905 shall be completed.

M-TR-2: Otay Mesa Road/Harvest Road (County/Caltrans/City) – If not completed by another development, ensure the following intersection improvements are implemented to the

satisfaction of the County of San Diego and City of San Diego Departments of Public Works and, if applicable, Caltrans: Signalize when warrants are met and widen the intersection to provide the following lane configuration: two eastbound left-turn lanes; one eastbound through lane; one eastbound shared through-right lane; one westbound left-turn lane, one westbound through lane, one westbound shared through-right lane; one northbound shared left-through-right lane; one southbound shared left-through lane; and two southbound right-turn lanes.

The Project Applicant shall conduct and submit a detailed signal warrant analysis prior to issuance of the first building permit. The signal shall be installed when warrants are met. Prior to the issuance of the first building permit of the Project, the Project Applicant shall either (i) have constructed intersection improvements, or (ii) entered into a secured agreement with the City and, if applicable, Caltrans to construct the improvements. If an agreement is entered into with the City and, if applicable, Caltrans, the agreement should specify that the improvements be operational prior to issuance of building permits. (Infeasible to guarantee completion)

M-TR-3: Airway Road/Sanyo Avenue (City) – If not completed by another development, ensure the following intersection improvements are implemented to the satisfaction of the County of San Diego and City of San Diego Departments of Public Works: Signalize when warrants are met and widen the intersection to provide the following lane configuration: one eastbound shared left-through-right lane; one westbound left-turn lane, one westbound through lane, one westbound right-turn lane; one northbound left-turn lane; one northbound shared through-right lane; one southbound shared left-through lane; and one southbound right-turn lane.

The Project Applicant shall conduct and submit a detailed signal warrant analysis prior to issuance of the first building permit. The signal shall be installed when warrants are met. Prior to the issuance of the first building permit of the Project, the Project Applicant shall either (i) have constructed intersection improvements, or (ii) entered into a secured agreement with the City to construct the improvements. If an agreement is entered into with the City, the agreement should specify that the improvements be operational prior to issuance of building permits. (Infeasible to guarantee completion)

Mitigation for Cumulative (2020) Project Impacts

M-TR-3: See above.

M-TR-4: Prior to issuance of building permits, the Project Applicant shall pay the County's Traffic Impact Fee (TIF). The TIF will provide for signalization and widening of the Airway Road/Paseo de las Americas intersection to the following lane configurations: signalization; one eastbound left-turn lane; one eastbound through lane; one eastbound shared through-right lane; one westbound left-turn lane; one westbound through lane; one westbound shared through-right lane; one northbound

shared left-through lane; one northbound right-turn lane; and one southbound left-through-right turn lane.

2.1.6 Conclusion

If the Proposed Project was implemented prior to the completion of SR-905 Phase 1A, it would result in a significant direct impact on Interim SR-905/Otay Mesa Road between Old Otay Mesa Road and Siempre Viva Road. M-TR-1 would require that the road be completed and operational prior to the issuance of project building permits. Thus, TR-1 would be fully mitigated by M-TR-1.

The proposed project would have a significant direct impact on the intersection of Otay Mesa Road and Harvest Road (TR-2). Improvements proposed to this intersection under M-TR-2 would reduce these impacts to below a level of significance. It is noted that these improvements are currently under the jurisdiction of the City of San Diego/Caltrans; however, Caltrans will return their portion of Otay Mesa Road to the County jurisdiction once SR-905 Phase 1A is completed.

Since a portion of M-TR-2 is located within the City of San Diego and would require City of San Diego approval, there is potential for the City of San Diego to not approve these improvements . Thus, M-TR-2 would be potentially infeasible to complete and TR-2 would remain significant and unmitigated.

The proposed project would have a significant direct and cumulative (year 2020) impact on the intersection of Airway Road and Sanyo Avenue (TR-3). Improvements to the approach lanes required by Mitigation Measure M-TR-3 would allow the intersection to handle project traffic which would reduce the project impact to below a level of significance. However, M-TR-3 is located completely within the City of San Diego and would require City of San Diego approval. As such, there is potential for the City of San Diego to not approve these improvements and M-TR-3 would be potentially infeasible to complete. Thus, TR-3 would remain significant and unmitigated.

The proposed project would have a significant cumulative (year 2020) impact on the intersection of Airway Road and Paseo de las Americas (TR-4). Payment of TIF fees as required by Mitigation Measure M-TR-4 would provide an adequate contribution toward planned improvements to this intersection which would reduce the proposed project's impact to less than significant.

The County's Traffic Impact Fee ("TIF") program provides a mechanism for mitigating the impacts created by future growth within the unincorporated area. The TIF is a fee paid by developers to facilitate compliance with the CEQA mandate that development Projects mitigate their indirect, cumulative traffic impacts. The County TIF program assesses the fee on all new development that results in new/added traffic. The primary purpose of the TIF is twofold: (1) to fund the construction of identified roadway facilities needed to reduce, or mitigate, projected cumulative traffic impacts resulting from future development within the County; and (2) to

allocate the costs of these roadway facilities proportionally among future developing properties based upon their individual cumulative traffic impacts.

TIF fees are collected into 23 local Community Planning Area accounts, three regional accounts, and three regional freeway ramp accounts. TIF funds are only used to pay for improvements to roadway facilities identified for inclusion in the TIF program, which include both County roads and Caltrans highway facilities. TIF funds collected for a specific local or regional area must be spent in the same area. For example, TIF fees collected in the South Region TIF account may only be used for improvements to TIF facilities in the South Region. By ensuring TIF funds are spent for the specific roadway improvements identified in the TIF program, the CEQA mitigation requirement is satisfied and the Mitigation Fee Act nexus is met.

As part of the TIF program process, the transportation infrastructure needs are characterized as existing deficiencies, direct impacts of future development, or indirect (cumulative) impacts of future development. Existing roadway deficiencies are the responsibility of existing developed land uses and government agencies, and cannot be financed with impact fees. The TIF program is not intended to mitigate direct impacts, which will continue to be the responsibility of individual development projects. The TIF program is designed to only address the cumulative impacts associated with new growth.

The County TIF program enables projects to complete CEQA compliance and move forward by paying a fair share of the cost of improving roads in the future as the levels of service become unacceptable due to increased traffic volume caused by the cumulative impacts of various developments. The County's TIF program goes into great detail in identifying anticipated development, the roads affected, roadway costs, and the existing and projected levels of service on those roads. As sufficient funds become available, the County will implement the improvements that it has committed to.

Table 2.1-1
EXISTING PLUS PROJECT CONDITIONS
ROADWAY AND FREEWAY SEGMENT DAILY LOS SUMMARY

Roadway Segment	Jurisdiction	Class	Capacity (LOS E)	Existing			Existing + Project					
				ADT	V/C	LOS	Project Traffic	ADT	V/C	LOS	Δ V/C	Sig?
Otay Mesa Rd. (Old Otay Mesa Rd.)												
SR-125 to SR-905 Connector	**County**/City/ Caltrans	4M(m)	47,000	16,686	0.36	A	7,405	24,091	0.51	B	0.15	No
SR-905 Connector to Harvest Rd.	**County**/City/ Caltrans	4M(m)	47,000 (a)	9,738	0.21	A	13,671	23,409	0.50	B	0.29	No
Harvest Rd to Sanyo Ave.	**County**/City/ Caltrans	4M	37,000	8,224	0.22	A	6,380	14,604	0.39	A	0.17	No
Airway Road												
Sanyo Ave. to Paseo de las Americas	City	4M	40,000	5,649	0.14	A	6,380	**12,029**	0.30	A	0.16	No
Siempre Viva Road												
SR-905 NB to Paseo de las Americas	City	6P	60,000	26,653	0.44	B	6,380	33,033	0.55	B	0.11	No
La Media Road												
Otay Mesa Rd. to St Andrews Ave.	City	4C	30,000	**15,225**	0.51	C	**558**	**15,783**	0.53	C	0.02	No
SR-125												
North of Otay Mesa Rd.	Caltrans	4-FWY	(b)	30,000	0.33	A	3,190	33,190	0.36	A	0.03	No
State Route 905												
Otay Mesa Rd. to Siempre Viva Rd.	**City**/Caltrans	4M	40,000	**37,823**	**0.95**	**E**	**4,386**	**42,209**	**1.06**	**F**	**0.11**	**Yes**
South of Siempre Viva Rd.	City/**Caltrans**	4-FWY	(b)	28,000	0.32	A	11,165	39,165	0.44	B	0.12	No
Harvest Road												
Project Access B to Project Access A	County	4I/C	34,200	(c)	-	-	4,557	4,557	0.13	A	-	No
Project Access A to Otay Mesa Rd.	County	4I/C	34,200	(c)	-	-	20,507	20,507	0.60	B	-	No

Table 2.1-1 (cont.)
EXISTING PLUS PROJECT CONDITIONS
ROADWAY AND FREEWAY SEGMENT DAILY LOS SUMMARY

Roadway Segment	Jurisdiction	Class	Capacity (LOS E)	Existing			Existing + Project					
				ADT	V/C	LOS	Project Traffic	ADT	V/C	LOS	Δ V/C	Sig?
Sanyo Avenue												
Otay Mesa Rd. to Airway Rd.	City	4C	30,000	2,666	0.09	A	6,380	9,046	0.30	A	0.21	No
Paseo de las Americas												
Airway Rd. to Siempre Viva Rd.	City	4C	30,000	5,300	0.18	A	6,380	11,680	0.39	B	0.21	No

Source: Darnell & Associates, Inc. 2010
Bold = Jurisdiction which capacity & significance criteria is based on; ADT= Average Daily Traffic; LOS= Level of Service; V/C = Volume-to LOS E Capacity Ratio; 4-FWY = 4-Lane Freeway: 6P = 6-Lane Prime Arterial; 4M(m) = Modified 4-Lane Major Road; 4M = 4-Lane Major Arterial; C = Collector; 4C = 4-Lane Collector; LC = Light Collector; 4I/C= Modified 4-Lane Industrial/Commercial Collector; Δ = net change.
(a) Additional lanes may be provided to accommodate turning movements and freeway access; hence the roadway capacity was assumed to be 47,000 ADT at LOS E (half-way between a 4-lane Major & 6-Lane Prime Arterial).
(b) Capacity based on Caltrans District 11 & HCM procedures
(c) Harvest Road currently only exists as a dirt road and has nominal traffic (improvements are proposed as a part of the project; see Section 2.1.2.3)
Sig = Significant

Table 2.1-2
EXISTING PLUS PROJECT CONDITIONS
ARTERIAL LOS SUMMARY

Intersection	Jurisdiction	Direction of Travel	Existing		Existing + Project			
			Speed (mph)	LOS	Speed (mph)	LOS	Δ Speed	Sig?
AM Peak Hour								
Interim SR-905 – Britannia Blvd. to La Media Rd.	City/Caltrans	Eastbound	42.6	A	42.5	A	(0.1)	No
		Westbound	43.6	A	43.5	A	(0.1)	
Interim SR-905 – La Media Rd. to Piper Ranch Rd.	City/Caltrans	Eastbound	38.5	A	38.4	A	(0.1)	No
		Westbound	33.0	B	32.9	B	(0.1)	
Interim SR-905 – Piper Ranch Rd. to SR125	City/Caltrans/ County	Eastbound	34.0	B	33.5	B	(0.5)	No
		Westbound	29.5	B	29.4	B	(0.1)	
PM Peak Hour								
Interim SR-905 – Britannia Blvd. to La Media Rd.	City/Caltrans	Eastbound	35.4	A	35.0	B	(0.4)	No
		Westbound	39.4	A	39.3	A	(0.1)	
Interim SR-905 – La Media Rd. to Piper Ranch Rd.	City/Caltrans	Eastbound	38.1	A	37.9	A	(0.2)	No
		Westbound	28.3	B	28.1	B	(0.2)	
Interim SR-905 – Piper Ranch Rd. to SR125	City/Caltrans/ County	Eastbound	35.8	A	35.3	A	(0.5)	No
		Westbound	34.2	B	35.3	A	1.1	

Source: Darnell & Associates, Inc. 2010
LOS = Level of Service; Speed is measured in miles per hour (mph); sig=signalized; Δ Speed = Increase (decrease) in speed;
Occasionally adding traffic to a critical movement optimizes the segment resulting in increase in speed.
Sig = Significant

Table 2.1-3
EXISTING PLUS PROJECT CONDITIONS
INTERSECTION LOS SUMMARY (SYNCRO ANALYSIS)

Intersection	Jurisdiction	Traffic Control	Critical Move	Existing				Existing + Project									
				AM Peak Hour		PM Peak Hour		AM Peak Hour					PM Peak Hour				
				Delay	LOS	Delay	LOS	Delay	LOS	Project Traffic	Δ Delay	Sig?	Delay	LOS	Project Traffic	Δ Delay	Sig?
Otay Mesa Rd./ Britannia Blvd.	**City**/ Caltrans	Signal	Int.	10.3	B	18.8	B	10.8	B	39	0.5	No	19.9	B	128	1.1	No
Otay Mesa Rd./ La Media Rd.	**City**/ Caltrans	Signal	Int.	14.1	B	27.0	C	14.3	B	53	0.2	No	28.1	C	184	1.1	No
Otay Mesa Rd./ Piper Ranch Rd.	**County**/ City/ Caltrans	Signal	Int.	6.1	A	3.6	A	6.2	A	58	0.1	No	3.3	A	200	(0.3)	No
Otay Mesa Rd./ SR-125 SB	**County**/ City/ Caltrans	Signal	Int.	11.2	B	2.5	A	11.8	B	115	0.6	No	5.0	A	360	2.5	No
Otay Mesa Rd./ SR-125 NB	**County**/ City/ Caltrans	Signal	Int.	0.9	A	5.6	A	0.8	A	153	(0.1)	No	4.6	A	518	(1.0)	No
Otay Mesa Rd./ SR-905 Connector	**County**/ City/ Caltrans	Signal	Int.	16.1	B	21.1	C	13.6	B	486	(2.5)	No	17.4	B	1,482	(3.7)	No
Otay Mesa Rd./ Harvest Rd.[a]	**County**/ City	TWSC	NB	-	-	13.1	B	(a)	(a)	-	-	-	(a)	(a)	-	-	-
			SB	9.5	A	11.4	B			-	-	-			-	-	-
		Signal	Int.	(a)	(a)	12.6	(a)	14.6	B	658	-	No	**123.1**	**F**	**2,165**	**-**	**Yes**
Otay Mesa Rd./ Sanyo Ave.	**County**/ City	Signal	Int.	4.1	A	9.9	B	5.7	A	168	1.6	No	11.8	B	638	(0.8)	No
Airway Rd./ Sanyo Ave.	City	AWSC	EB	10.1	A	9.1	A	11.2	B	0	1.1	No	13.4	B	0	3.5	**Yes**
			WB	8.1	A	9.2	A	8.5	A	43	0.4		12.9	B	120	3.8	
			NB	8.0	A	8.0	A	8.4	A	0	0.4		11.8	B	0	2.6	
			SB	9.6	A	9.1	A	14.1	B	125	4.5		**159.6**	**F**	**518**	**151.6**	
			Int.	9.3	A	10.6	A	11.8	B	168	2.5		**82.6**	**F**	**638**	**73.5**	

Table 2.1-3 (cont.)
EXISTING PLUS PROJECT CONDITIONS
INTERSECTION LOS SUMMARY (SYNCRO ANALYSIS)

Intersection	Jurisdiction	Traffic Control	Critical Move	Existing				Existing + Project									
				AM Peak Hour		PM Peak Hour		AM Peak Hour					PM Peak Hour				
				Delay	LOS	Delay	LOS	Delay	LOS	Project Traffic	ΔDelay	Sig?	Delay	LOS	Project Traffic	Δ Delay	Sig?
Airway Rd./ Paseo de las Americas	County/ City	OWSC	NBL	9.7	A	11.0	B	10.6	B	43	0.9	No	19.6	C	120	9.0	No
Siempre Viva Rd./ SR-905 SB to EB Siempre Viva Rd.	City/ **Caltrans**	Signal	Int.	7.0	A	8.5	A	9.5	A	135	2.5	No	29.8	C	558	21.3	No
Siempre Viva Rd./ SR-905 SB to WB Siempre Viva	City/ **Caltrans**	OWSC	SB	14.3	B	13.3	B	15.9	C	0	1.6	No	13.0	B	0	(0.3)	No
Siempre Viva Rd./ SR-905 NB Ramp	City/ **Caltrans**	Sig	Int.	10.8	B	11.0	B	10.4	B	168	(0.4)	No	10.9	B	638	(0.1)	No
Siempre Viva Rd./ Paseo de las Americas	City	Sig	Int.	24.7	C	40.0	D	24.5	C	168	0.2	No	45.8	D	638	5.8	No

Source: Darnell & Associates, Inc. 2010
(a) Intersection is two-way stop-controlled under existing conditions and signalized under existing plus project conditions
LOS=Level of Service; Delay is measured in seconds/vehicle; sig=signalized; AWSC=All Way Stop Controlled; TWSC = Two-Way Stop-Controlled; OWSC=One Way Stop Controlled;
Int = Intersection; NB = Northbound Approach; SB = Southbound Approach; EB = Eastbound Approach; WB = Westbound Approach; NBL = Northbound Left; SBX = South Bay Expressway;
E-W = East-West Roadway; N-S = North-South Roadway; **Bold** = Jurisdiction which significance criteria is based on
Δ Delay = Increase (decrease) in delay; Occasionally adding traffic to a critical movement optimizes the intersection resulting in a decrease in delay
Sig = Significant

Table 2.1-4
EXISTING PLUS PROJECT CONDITIONS
INTERSECTION TRAFFIC FLOW SUMMARY (ILV ANALYSIS)

Intersection	Existing				Existing Plus Project			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	ILV/Hour	Operating Condition	ILV/Hour	Operating Condition	ILV/Hour	Operating Condition	ILV/Hour	Operating Condition
Otay Mesa Rd. / Britannia Blvd.	796	Stable Flow	963	Stable Flow	801	Stable Flow	995	Stable Flow
Otay Mesa Rd. / La Media Rd .	740	Stable Flow	924	Stable Flow	759	Stable Flow	978	Stable Flow
Otay Mesa Rd. / Piper Ranch Rd .	802	Stable Flow	783	Stable Flow	818	Stable Flow	825	Stable Flow
Otay Mesa Rd. / SR-125 SB	701	Stable Flow	677	Stable Flow	736	Stable Flow	773	Stable Flow
Otay Mesa Rd. / SR-125 NB	417	Stable Flow	754	Stable Flow	431	Stable Flow	814	Stable Flow
Otay Mesa Rd. / SR-905 Connector	700	Stable Flow	911	Stable Flow	595	Stable Flow	1,158	Stable Flow
Siempre Viva / SR-905 SB to EB Siempre Viva	425	Stable Flow	677	Stable Flow	488	Stable Flow	996	Stable Flow
Siempre Viva / SR-905 NB Ramp	442	Stable Flow	578	Stable Flow	484	Stable Flow	801	Stable Flow

Source: Darnell & Associates, Inc. 2010
ILV/Hour = Intersecting Lane Vehicles Per Hour; E-W = East-West Roadway; N-S = North-South Roadway
<1,200 ILV/Hour = Stable Flow; 1,200 - 1,500 ILV/Hour = Unstable Flow; 1,500 ILV/Hour = Capacity, Stop and Go Operation
Note: This analysis is only included for Caltrans informational purposes and is not used to determine project impacts.

Table 2.1-5
COUNTY TRAFFIC GUIDELINES

Allowable Increases on Congested Roads and Intersections					
LOS	**Intersections**		**Road Segments**		
	Signalized	**Unsignalized**	**2-Lane Road**	**4-Lane Road**	**6-Lane Road**
LOS E	Delay of 2 seconds	20 or less peak hour trips on a critical movement	200 ADT	400 ADT	600 ADT
LOS F	Either a delay of 1 second, or 5 peak hour trips or less on a critical movement	5 peak hour trips or less on a critical movement	100 ADT	200 ADT	300 ADT

Allowable Change due to Project Impact on County Circulation Element Roads, Signalized Intersections, and Ramps							
LOS with Project	**Freeways**		**Roadway Segments***		**Intersections****	**Ramps**	**Ramps with > 15 min. delay**
	V/C	**Speed (mph)**	**V/C**	**Speed (mph)**	**Delay (sec.)**	**Delay (min.)**	**Delay (min.)**
E and F	0.01	1	0.02	1	2	-	2

Notes:
– A critical movement is an intersection movement (right turn, left turn, through movement) that experiences excessive queues, which typically operate at LOS F. Also, if a project adds significant volume to a minor roadway approach, a gap study should be provided that details the headways between vehicles on the major roadway.
– By adding proposed project trips to all other trips from a list of projects, this same table must be used to determine if total cumulative impacts are significant. If cumulative impacts are found to be significant, each project that contributes additional trips must mitigate a share of the cumulative impacts.
– The County may also determine impacts have occurred on roads even when a project's traffic or cumulative impacts do not trigger an unacceptable level of service, when such traffic uses a significant amount of remaining road capacity.
– For determining significance at signalized intersection with LOS F conditions, the analysis must evaluate both the delay and the number of trips on a critical movement, exceedance of either criteria result in a significant impact.
* For County arterials, which are identified in SANDAG's Regional Transportation plan and Congestion Management Plan as regionally significant arterials, significance may be measured based on an increase in ADT. The allowable change in ADT due to project impacts in this instance would be identified in the table.
** Signalized intersections
sec = Seconds of Delay per Vehicle

Table 2.1-6
CITY OF SAN DIEGO TRAFFIC THRESHOLDS

LOS with Project*	Allowable Change Due to Project Impact**					
	Freeways		Roadway Segments		Intersections	Ramp Metering
	V/C	Speed (mph)	V/C	Speed (mph)	Delay (seconds)	Delay (min.)
E (or ramp meter delays above 15 min.)	0.010	1.0	0.02	1.0	2.0	2.0
F (or ramp meter delays above 15 min.)	0.005	0.5	0.01	0.5	1.0	1.0

Notes: The allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway LOS E is 2 minutes.
The allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway LOS F is 1 minute.

* All LOS measurements are based on Highway Capacity Manual procedures for peak hour conditions. However,, V/C ratios for roadway segments are estimated on an ADT/24-hour traffic volume basis (using Table 2 of the City's Traffic Impact Study Manual. The acceptable LOS for freeways, roadways, and intersections is generally LOS D (LOS C for undeveloped locations). For metered freeway ramps, LOS does not apply. Ramp meter delays above 15 minutes are considered excessive.

** If a proposed project's traffic causes the values shown on the table to be exceeded, the impacts are determined to be significant. The project applicant shall then identify feasible improvements (within the Traffic Impact Study) that will restore/and maintain the traffic facility at an acceptable LOS. If the LOS with the proposed project becomes unacceptable, or if the project adds a significant amount of peak hour trips to cause any traffic queues to exceed on- or off-ramp storage capacities, the project applicant shall be responsible for mitigating the project's direct significant and/or cumulatively considerable traffic impacts.

Table 2.1-7
EXISTING PLUS PROJECT AND CUMULATIVE (2020) PLUS PROJECT
SITE ACCESS INTERSECTION LOS SUMMARY

Intersection	Existing + Project						Cumulative (2020) + Project					
	Traffic Control	Critical Move.	AM Peak Hour		PM Peak Hour		Traffic Control	Critical Move.	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS			Delay	LOS	Delay	LOS
Harvest Rd./ Driveway A	Signal	Int.	17.4	B	17.5	B	Signal	Int.	18.2	B	17.6	B
Harvest Rd./ Driveway B	OWSC	EB	8.5	A	9.3	A	OWSC	EB	9.1	A	10.3	B
		NBL	7.3	A	7.6	A		NBL	7.5	A	8.1	A
Otay Mesa Rd./ Interim SR-905-Driveway C	OWSC	SB	9.8	A	15.3	C	OWSC	SB	10.2	B	18.6	C

Source: Darnell & Associates, Inc. 2010
Delay = seconds/vehicle; LOS = Level of Service; Crit. Move = Critical Movement; OWSC = One-Way Stop-Controlled; Int.=Intersection; EB=Eastbound; NBL=Northbound Lane; SB=Southbound

Table 2.1-8
EXISTING PLUS PROJECT AND CUMULATIVE (2020) PLUS PROJECT
SITE ACCESS 95TH PERCENTILE QUEUING SUMMARY (FEET)

Intersection	Move	Lanes	Length	Existing Plus Project (Mitigated)							Cumulative (2020) + Project						
				Run 1	Run 2	Run 3	Run 4	Run 5	Avg.	Max	Run 1	Run 2	Run 3	Run 4	Run 5	Avg.	Max
Otay Mesa Rd./ SR-125 NB Ramp	WBR	1	310	56	59	54	50	55	55	59	52	52	51	60	50	53	60
		2	430	51	52	48	32	39	44	52	59	52	33	44	52	48	59
Otay Mesa Rd./ Driveway C	WBR	1	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SBR	1	280	69	56	56	29	57	53	69	67	112	77	52	93	81	112
Otay Mesa Rd./ Harvest Rd.	EBL	1	500	299	358	598	299	299	371	598	300	298	298	299	297	299	300
		2	500	331	365	304	301	337	328	365	61	49	78	221	146	111	221
	SBL	1	120	**182**	**174**	**148**	**177**	**149**	**166**	**182**	**159**	**190**	**165**	**158**	**180**	**171**	**190**
	SB-LTR	1	490	**535**	**570**	**657**	**505**	**441**	**542**	**657**	292	339	390	211	272	301	390
	SBR	2	490	**639**	**471**	573	**165**	41	**378**	**639**	332	310	274	191	153	252	332
Harvest Rd./ Driveway A	EBL-R	1	280	**457**	**198**	**444**	**113**	**143**	**275**	**475**	104	101	90	99	68	93	104
	EBR	1	280	**403**	156	277	109	80	205	**403**	155	92	95	89	92	105	155
	NBL	1	250	184	174	177	157	176	174	184	169	113	158	113	127	136	169
		2	250	215	171	214	166	198	193	215	194	134	181	157	174	168	194

Source: Darnell & Associates, Inc. 2010
EBL = Eastbound Left; EBL-R = Shared Eastbound Left-Right; EBR = Eastbound Right; WBR = Westbound Right; NBL = Northbound Left; SBL = Southbound Left; SB-LT = Shared Southbound Left-Through; SB-LTR = Shared Southbound Left-Through-Right; SBR = Southbound Right; 95 Percentile Queue = Is the Maximum Back of Queue with the 95-percentile Traffic Volumes; Avg = Average of the 95 Percentile Queue Observed; Max = Maximum 95 Percentile Queue Observed

Table 2.1-9
CUMULATIVE (2020) TRIP GENERATION

Project Name	Project Location	Acres	Land Use	Total ADT	% in 2020	ADT in 2020
Projects Processing Site Plans						
1. California Crossings (#21)	NW Corner of Otay Mesa Rd & Harvest Rd	29.6	325,502 SF of Community Shopping Ctr	22,785	100%	22,785
2. Corrections Corporation of America Correctional Facility (#18)	n/o Calzada De La Fuente, e/o Alta Rd	37.0	2,132 Bed Correctional Detention Facility	2,323	100%	2,323
3. Road/One COPART Salvage Auto Auctions(#10) (a)	SW Corner of Otay Mesa Rd & Alta Rd	38.2	Auto Auction	846	100%	846
4. Saeed TM/ Airway Business Center (FEDEX Site Plan) (#2)	NE Corner of Airway Rd & Paseo de las Americas	18.9	FEDEX Distribution Center	1,598	100%	1,598
5. East Otay Mesa Auto Storage/ Aaron Construction Auto Auction Park (Insurance Auto Auctions) (#8)	NW Corner of Otay Mesa Rd & Alta Rd	38.2	Auto Auction	354	100%	354
6. Salvage Yards Major Use Permit Modification (#11)	East & West Side of Alta Rd, n/o Otay Mesa Rd	162.0	Auto Recycling & Salvage Yards	2,408	100%	2,408
7. Sunroad Interim Uses - Sunroad Centre I Harvest Ranch Nursery (#1)	n/o Otay Mesa Rd btwn Harvest Rd & Vann Centre Blvd	138.0	Nursery	14	100%	14
8. Otay Mesa Travel Plaza (#5)	e/o Enrico Fermi Drive, btwn Otay Mesa Rd & Airway Rd	83.6	Truck Stop	5,116	100%	5,116
9. Vulcan Batching Plant (#17)	NE quadrant of Lone Star Rd (Paseo De La Fuente) & Otay Mesa Rd	12.7	Asphalt & Concrete Plant	1,078	100%	1,078
	Sub-Total	**558.2**	-	**36,522**	**100%**	**36,522**
Projects Processing Tentative Maps						
10. International Industrial Park (#22)	n/o Lone Star Rd btwn Vann Centre Blvd & Enrico Fermi Dr	170.6	111.05-acre Business/Technology Park	13,326	13%	1,732
11. OMC Properties (#24)	NE Corner of Otay Mesa Rd & Alta Rd	49.8	30.1 acres Technology Business Park & 8.4 acres Commercial Retail	9,380	13%	1,219
12. Otay Business Park (#13)	s/o Airway Rd, East of Alta Rd	161.6	2,092,900 SF of Industrial/ Business Park	33,486	13%	4,353
13. Otay Crossings Commerce Park (#20)	SE Quadrant of Otay Mesa Rd & Alta Rd	311.4	Mixed Industrial & Temporary Truck Parking	21,279	13%	2,766

Table 2.1-9 (cont.)
CUMULATIVE (2020) TRIP GENERATION

Project Name	Project Location	Acres	Land Use	Total ADT	% in 2020	ADT in 2020
Projects Processing Tentative Maps (cont.)						
14. Sunroad Centrum Tech Center (Sunroad/Otay Tech Centre) (#1)	n/o Otay Mesa Rd btwn Harvest Rd & Vann Centre Blvd	253.1	130 acres Technology Business Park & 27 acres Commercial Retail	30,566	13%	3,974
15. Maple Leaf Industrial/Piper Otay Park (#19)	NE quadrant of Otay Mesa Rd & Piper Ranch Rd	25.0	Light Industrial	1,612	13%	210
16. Dillard and Judd Roll County LLC/ Enrico Fermi Industrial Park (South County Commerce Centre) (#3)	SW Corner of Otay Mesa Rd & Enrico Fermi Dr	80.0	Industrial	7,159	13%	931
17. Saeed TM/Airway Business Center (#2)	n/o Airway Rd btwn Paseo De Las Americas & Michael Faraday Dr	16.1	Industrial	2,602	13%	338
	Sub-Total	**1,067.6**	-	**119,410**	**13%**	**15,523**
	Grand-Total	**1,625.8**	-	**155,932**	**-**	**52,045**

Source: Darnell & Associates, Inc. 2010
(a) Existing Interim Use processing a time Extension
NW = Northwest; NE = Northeast; SW = Southwest; SE = Southeast; n/o = north of; s/o = south of; e/o = East of; btwn = between; # corresponds to the cumulative project number in Figure 1-9

Table 2.1-10
CUMULATIVE (2020) PLUS PROJECT CONDITIONS
ROADWAY AND FREEWAY SEGMENT DAILY LOS SUMMARY

Roadway Segment	Existing						Cumulative (2020) + Project						
	Jurisdiction	Class	Capacity (LOS E)	ADT	V/C	LOS	Class	Capacity (LOS E)	Project Traffic	ADT	V/C	LOS	Sig?
Otay Mesa Road													
Britannia Blvd. to La Media Rd.	**City**	6P	60,000	**58,999**	**0.98**	**E**	6P	60,000	479	22,070	0.37	A	No
La Media Rd. to Piper Ranch Rd.	**City**	5M	45,000	**44,523**	**0.99**	**E**	5M	45,000	8,214	31,600	0.70	C	No
Piper Ranch Rd. to SR-125	**County**/City	6P	57,000	43,109	0.76	C	6P	57,000	8,374	27,750	0.49	B	No
Otay Mesa Road (Old Otay Mesa Rd)													
SR-125 to Driveway C	**County**/City	4M(m)	47,000(a)	**41,951**	**0.89**	**E**	5M(a)	47,000	16,519	33,300	0.71	C	No
Driveway C to Harvest Rd.	**County**/City	4M(m)	47,000(a)	**41,951**	**0.89**	**E**	5M(a)	47,000	17,658	33,340	071	C	No
Harvest Rd. to Sanyo Ave.	**County**/City	4M	37,000	23,784	0.70	C	4M	37,000	4,386	12.870	0.35	A	No
Airway Road													
Sanyo Ave. to Paseo de las Americas	City	4M	40,000	29,164	0.73	C	4M	40,000	4,386	16,030	0.40	B	No
Siempre Viva Road													
SR-905 to Paseo de las Americas	City	6P	60,000	50,614	0.84	D	6P	60,000	4,386	53,6250	0.89	D	No
La Media Road													
Otay Mesa Rd. to SR-905	City	2C	10,000	**20,284**	**2.03**	**F**	4C(m)	35,000(b)	7,736	28,210	0.81	D	No
SR-125													
North of Otay Mesa Rd.	Caltrans	FWY	(c)	56,050	0.61	B	4-FWY	(c)	3,190	13,490	0.15	A	No
Existing State Route 905													
Otay Mesa Rd. to Siempre Viva Rd.	City/**Caltrans**	FWY	(c)	84,521	0.64	C	DNE	DNE	DNE	DNE	DNE	-	-
South of Siempre Viva Rd.	City/**Caltrans**	FWY	(c)	43,785	0.33	A	4-FWY	(c)	11,165	76,130	0.86	D	No

Table 2.1-10 (cont.)
CUMULATIVE (2020) PLUS PROJECT CONDITIONS
ROADWAY AND FREEWAY SEGMENT DAILY LOS SUMMARY

Roadway Segment	Existing						Cumulative (2020) + Project						
	Jurisdiction	Class	Capacity (LOS E)	ADT	V/C	LOS	Class	Capacity (LOS E)	Project Traffic	ADT	V/C	LOS	Sig?
New State Route 905													
Britannia Blvd. to La Media Rd.	Caltrans	DNE	DNE	DNE	DNE	DNE	6-FWY	(c)	798	102,240	0.77	C	No
La Media Rd. to Siempre Viva Rd.	Caltrans	DNE	DNE	DNE	DNE	DNE	6-FWY	(c)	6,779	90,160	0.68	C	No
Harvest Road													
Project Access B to Project Access A	County	Dirt	-	(d)	-	-	4I/C(m)	34,200	4,557	11,390	0.33	A	No
Project Access A to Otay Mesa Rd.	County	Dirt	-	(d)	-	-	4I/C(m)	34,200	19,367	26,660	0.78	C	No
Sanyo Avenue													
Otay Mesa Rd. to Airway Rd.	City	4C	30,000	7,314	0.24	A	4C	30,000	4,386	16,220	0.54	C	No
Paseo de las Americas													
Airway Rd. to Siempre Viva Rd.	City	4C	30,000	11,714	0.39	B	4C	30,000	4,386	20,640	0.69	D	No

Source: Darnell & Associates, Inc. 2010
City = Capacity of City segments is based on the upper limits of LOS E per the City of San Diego; County = Capacity of County segments is based on the upper limits of LOS E per the County of San Diego; **Bold** = Jurisdiction which capacity & significance criteria is based on; ADT= Average Daily Traffic; LOS= Level of Service; V/C = Volume-to LOS E Capacity Ratio; 4-FWY=4-Lane Freeway; 6-FWY = 6-Lane Freeway; 6P = 6-Lane Prime Arterial; 5M = 5-Lane Major Arterial; 4M(m) = Modified 4-Lane Major Road ; 4M = 4-Lane Major Arterial; C = Collector; 4C = 4-Lane Collector; 4I/C(m)= 4-Lane Modified Industrial/Commercial Collector; LC = Light Collector; DNE= does not exist.
(a) Additional lanes may be provided to accommodate turning movements and freeway access; hence the roadway capacity was assumed to be 47,000 ADT at LOS E (half-way between a 4-lane Major & 6-Lane Prime Arterial).
(b) This segment provides two northbound through lanes, three southbound through lanes, one southbound right turn lane, and a painted median. Thus, the roadway capacity was assumed to be 35,000 ADT at LOS E (half-way between a 4-lane Collector and 4-lane Arterial).
(c) The LOS for SR-905 was determined based on the Caltrans District 11 procedures.
(d) Harvest Road currently only exists as a dirt road and has nominal traffic.
Sig = Significant

Table 2.1-11
CUMULATIVE (2020) PLUS PROJECT CONDITIONS
INTERSECTION LOS SUMMARY (SYNCRO ANALYSIS)

Intersection	Jurisdiction	Traffic Control	Critical Move	Existing				Cumulative (2020) + Project									
				AM Peak Hour		PM Peak Hour		AM Peak Hour					PM Peak Hour				
				Delay	LOS	Delay	LOS	Delay	LOS	Project Traffic	Δ Delay	Sig?	Delay	LOS	Project Traffic	Δ Delay	Sig?
Otay Mesa Rd./ Britannia Blvd.	**City**/ Caltrans	Signal	Int.	10.3	B	18.8	B	8.6	A	15	-1.7	No	12.6	B	48	-6.2	No
Otay Mesa Rd./ La Media Rd.	**City**/ Caltrans	Signal	Int.	14.1	B	27.0	C	11.3	B	235	-2.8	No	23.7	C	821	-3.3	No
Otay Mesa Rd./ Piper Ranch Rd.	**County**/ City/ Caltrans	Signal	Int.	6.1	A	3.6	A	10.0	A	240	3.9	No	8.7	A	837	5.1	No
Otay Mesa Rd./ SR-125 SB	**County**/ City/ Caltrans	Signal	Int.	11.2	B	2.5	A	11.2	B	297	0	No	7.3	A	997	4.8	No
Otay Mesa Rd./ SR-125 NB	**County**/ City/ Caltrans	Signal	Int.	0.9	A	5.6	A	3.0	A	335	2.1	No	3.3	A	1,156	-2.3	No
Otay Mesa Rd./ Harvest Rd.	**County**/ City	TWSC (existing)	NB	-	-	13.1	B	-	-	-	-	-	-	-		-	-
			SB	9.5	B	11.4	B	-	-	-	-	-	-	-		-	No
		Signal (2020)	Int.	-	-	-	-	14.0	B	657	-	No	23.3	C	2,165	-	No
Otay Mesa Rd./ Sanyo Ave.	**County**/ City	Signal	Int.	4.1	A	12.6	B	18.9	B	144	14.8	No	52.6	D	439	40	No
Airway Rd./ Sanyo Ave.	City	AWSC	EB	10.1	A	9.9	A	21.5	C	0	11.4		21.2	C	0	11.3	
			WB	8.1	A	9.1	A	**63.6**	**F**	115	55.5		**165.5**	**F**	319	156.4	
			NB	8.0	A	9.2	A	13.8	B	0	5.8	**Yes**	**191.2**	**F**	0	182	**Yes**
			SB	9.6	A	8.0	A	312.8	**F**	29	303.2		**46.0**	**E**	120	38	
			Int.	9.3	A	9.1	A	**153.8**	**F**	144	144.5		**135.0**	**F**	439	125.9	
Airway Rd./ Paseo de las Americas	**County**/ City	OWSC (existing)	NBL-T	9.7	A	10.6	B	**837.4**	**F**	115	827.7	**Yes**	**Err**	**F**	319	-	**Yes**
		TWSC (2020)	SB	-	-	-	-	20.1	C	0	-		33.8	D	0	-	
Siempre Viva Rd./ SR-905 SB to EB Siempre Viva Rd.	City/ **Caltrans**	Signal	Int.	7.0	A	8.5	A	9.3	A	29	2.3	No	16.5	B	120	8	No

Table 2.1-11 (cont.)
CUMULATIVE (2020) PLUS PROJECT CONDITIONS
INTERSECTION LOS SUMMARY (SYNCRO ANALYSIS)

Intersection	Jurisdiction	Traffic Control	Critical Move	Existing				Cumulative (2020) + Project									
				AM Peak Hour		PM Peak Hour		AM Peak Hour					PM Peak Hour				
				Delay	LOS	Delay	LOS	Delay	LOS	Project Traffic	Δ Delay	Sig?	Delay	LOS	Project Traffic	Δ Delay	Sig?
Siempre Viva Rd./ SR-905 SB to WB Siempre Viva	City/ **Caltrans**	OWSC	SB	14.3	B	13.3	B	32.2	D	0	17.9	No	18.9	C	0	5.6	No
Siempre Viva Rd./ SR-905 NB Ramp	City/ **Caltrans**	Signal	Int.	10.8	B	11.0	B	13.9	B	144	3.1	No	14.7	B	439	3.7	No
Siempre Viva Rd./ Paseo De Las Americas	City	Signal	Int.	24.7	C	40.0	D	47.3	D	144	22.6	No	51.9	D	439	11.9	No

Source: Darnell & Associates, Inc. 2010
LOS=Level of Service; Delay is measured in seconds/vehicle; sig=signalized; AWSC=All Way Stop Controlled; TWSC = Two-Way Stop-Controlled; OWSC=One Way Stop Controlled; Int = Intersection; NB = Northbound Approach; SB = Southbound Approach; EB = Eastbound Approach; WB = Westbound Approach; NBL = Northbound Left; NBL-T = Northbound Left-Through; E-W = East-West Roadway; N-S = North-South Roadway; **Bold** = Jurisdiction which significance criteria is based on Δ Delay = Increase (decrease) in delay; Occasionally adding traffic to a critical movement optimizes the intersection resulting in a decrease in delay
Sig = Significant

Table 2.1-12
CUMULATIVE (2020) PLUS PROJECT CONDITIONS
INTERSECTION TRAFFIC FLOW SUMMARY (ILV ANALYSIS)

Intersection	Existing				Cumulative (2020) With SR-905 1A &1B			
	AM Peak Hour		PM Peak Hour		AM Peak		PM Peak	
	ILV/Hr	Operating Condition	ILV/Hr	Operating Condition	ILV/Hr	Operating Condition	ILV/Hr	Operating Condition
Otay Mesa Rd./ SR-125 SB	701	Stable Flow	677	Stable Flow	517	StableFlow	507	Stable Flow
Otay Mesa Rd. / SR-125 NB	417	Stable Flow	754	Stable Flow	630	Stable Flow	730	Stable Flow
Siempre Viva Rd. / SR-905 SB to EB Siempre Viva Rd.	425	Stable Flow	677	Stable Flow	943	Stable Flow	1,260	**Unstable Flow**
Siempre Viva Rd./ SR-905 NB Ramp	442	Stable Flow	578	Stable Flow	949	Stable Flow	1,036	Stable Flow

Source: Darnell & Associates, Inc. 2010
(a) Project Traffic is representative of what the project would assign to the roadway network if 100% of the project was developed by the year 2020, See Figure 4 in Section II
ILV/Hour = Intersecting Lane Vehicles Per Hour;
<1,200 ILV/Hour = Stable Flow; 1,200 - 1,500 ILV/Hour = Unstable Flow; 1,500 ILV/Hour = Capacity, Stop and Go Operation
E-W = East-West Roadway; N-S = North-South Roadway
Note: This analysis is only included for Caltrans informational purposes and is not used to determine project impacts.

Table 2.1-13
CUMULATIVE (2030) PLUS PROJECT CONDITIONS
ROADWAY AND FREEWAY SEGMENT DAILY LOS SUMMARY

Roadway Segment	Jurisdiction	Class	Capacity (LOS E)	Year 2030 w/o Project			Year 2030 + Project					
				ADT	V/C	LOS	Project Traffic	ADT	V/C	LOS	Δ V/C	Sig?
Lone Star Road												
SR-125 to Sunroad Blvd.	County	4M	37,000	31,007	0.84	D	2,393	33,400	0.90	D	0.06	No
Otay Mesa Road												
Britannia Blvd. to La Media Rd.	**City**	6P	60,000	40,505	0.68	C	1,595	42,100	0.70	C	0.02	No
La Media Rd. to Piper Ranch Rd.	**City**	6P	60,000	31,024	0.52	B	7,576	38,600	0.64	C	0.12	No
Piper Ranch Rd. to SR-125	**County**/City	P	57,000	18,526	0.33	A	8,374	26,900	0.47	B	0.14	No
SR-125 to Project Access C	**County**/City	P	57,000	27,399	0.48	B	13,101	40,500	0.71	C	0.23	No
Project Access C to Harvest Rd.	**County**/City	P	57,000	27,399	0.48	B	14,241	41,640	0.73	C	0.25	No
Harvest Rd. to Sunroad Blvd/Sanyo Ave.	**County**/City	P	57,000	16,114	0.28	A	4,386	20,500	0.36	A	0.08	No
Sunroad Blvd./Sanyo Ave to Vann Centre Rd.	**County**/City	P	57,000	22,602	0.40	B	798	23,400	0.41	B	0.01	No
Vann Centre Rd. to Enrico Fermi Dr.	County	P	57,000	20,502	0.36	A	798	21,300	0.37	A	0.01	No
Airway Road												
Sanyo Ave. to Paseo de las Americas	City	4M	40,000	7,611	0.19	A	3,589	11,200	0.28	A	0.09	No
Siempre Viva Road												
SR-905 to Paseo de las Americas	City	6P	60,000	51,411	0.86	D	3,589	55,000	0.92	D	0.06	No
La Media Road												
Otay Mesa Rd. to SR-905	City	6P	60,000	25,616	0.43	B	5,184	30,800	0.51	B	0.08	No
SR-125												
Lonestar Rd. to Otay Mesa Rd.	Caltrans	4-FWY	(b)	66,410	0.73	C	3,190	69,600	0.76	C	0.03	No
State Route 905												
Britannia Boulevard to La Media Road	Caltrans	8-FWY	(b)	155,202	0.88	D	798	156,600	0.89	D	0.01	No
Otay Mesa Rd. to Siempre Viva Rd.	Caltrans	6-FWY	(b)	80,111	0.61	B	3,589	83,700	0.63	C	0.02	No
South of Siempre Viva Rd.	Caltrans	4-FWY	(b)	65,122	0.74	C	7,178	72,300	0.82	D	0.08	No
Harvest Road												
Sunroad Blvd to Project Access B	County	4I/C(m)	34,200	12,382	0.36	A	3,418	15,800	0.46	B	0.10	No
Project Access B to Project Access A	County	4I/C(m)	34,200	9,534	0.28	A	6,266	15,800	0.46	B	0.18	No
Project Access A to Otay Mesa Rd.	County	4I/C(m)	34,200	4,050	0.12	A	15,950	20,000	0.58	B	0.46	No

Table 2.1-13 (cont.)
CUMULATIVE (2030) PLUS PROJECT CONDITIONS
ROADWAY AND FREEWAY SEGMENT DAILY LOS SUMMARY

Roadway Segment	Jurisdiction	Class	Capacity (LOS E)	Year 2030 w/o Project			Year 2030 + Project					
				ADT	V/C	LOS	Project Traffic	ADT	V/C	LOS	Δ V/C	Sig?
Sunroad Boulevard												
Lone Star Rd. to Zinser Rd.	County	4M	37,000	14,707	0.40	A	2,393	17,100	0.46	B	0.06	No
Zinser Rd. to Harvest Rd.	County	4M	37,000	24,007	0.65	B	2,393	26,400	0.71	C	0.06	No
Sanyo Avenue												
Otay Mesa Rd. to Airway Rd.	City	4C	30,000	21,411	0.71	D	3,589	25,000	0.83	D	0.12	No
Paseo de las Americas												
Airway Rd. to Siempre Viva Rd.	City	4C	30,000	17,911	0.60	C	3,589	21,500	0.72	D	0.12	No
Enrico Fermi Drive												
Otay Mesa Rd. to SR-11	County	4M(m)	47,000(a)	35,702	0.76	C	798	36,500	0.78	C	0.02	No

Source: Darnell & Associates, Inc. 2010
City = Capacity of City segments is based on the upper limits of LOS E per the City of San Diego; County = Capacity of County segments is based on the upper limits of LOS E per the County of San Diego; **Bold** = Jurisdiction which capacity & significance criteria is based on; ADT= Average Daily Traffic; LOS= Level of Service; V/C = Volume-to LOS E Capacity Ratio; 4-FWY = 4-Lane Freeway; 6-FWY=6-Lane Freeway; 6P/P = 6-Lane Prime Arterial; 4M(m) = Modified 4-Lane Major Arterial; 4M = 4-Lane Major Arterial; C = Collector; 4C = 4-Lane Collector; 4I/C(m)=4-Lane Modified Industrial/Commercial Collector.
(a) Additional lanes are be provided to accommodate turning movements and freeway access; hence the roadway capacity was assumed to be 47,000 ADT at LOS E (half-way between a 4-lane Major & 6-Lane Prime Arterial).
(b) The LOS for SR-905 was determined based on the Caltrans District 11 procedures.
Sig = Significant

Table 2.1-14
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Impact	Location	Jurisdiction	Impact Scenario	Mitigation	Mitigation Effect	Mitigation Feasibility	Is Mitigation Proposed by Applicant?	Final Significance of Impact
TR-1	Interim SR-905 between Otay Mesa Road and Siempre Viva Road	City/Caltrans	Direct	**M-TR-1:** Prior to issuance of building permits, Phase 1A of SR-905 shall be completed.	Improves traffic flow from unacceptable LOS E to acceptable LOS C.	Feasible	Yes	Less Than Significant
TR-2	Otay Mesa Road/ Harvest Road	City/County/ Caltrans	Direct	**M-TR-2:** Otay Mesa Road/Harvest Road (County/Caltrans/City) – If not completed by another development, ensure the following intersection improvements are implemented to the satisfaction of the County of San Diego and City of San Diego Departments of Public Works and, if applicable, Caltrans: Signalize when warrants are met and widen the intersection to provide the following lane configuration: two eastbound left-turn lanes; one eastbound through lane; one eastbound shared through-right lane; one westbound left-turn lane, one westbound through lane, one westbound shared through-right lane; one northbound shared left-through-right lane; one southbound shared left-through lane; and two southbound right-turn lanes.	Improves traffic flow from LOS F to acceptable LOS D	Infeasible to guarantee since outside the jurisdiction of the County of San Diego	Yes	Significant (mitigation potentially infeasible)

Table 2.1-14 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

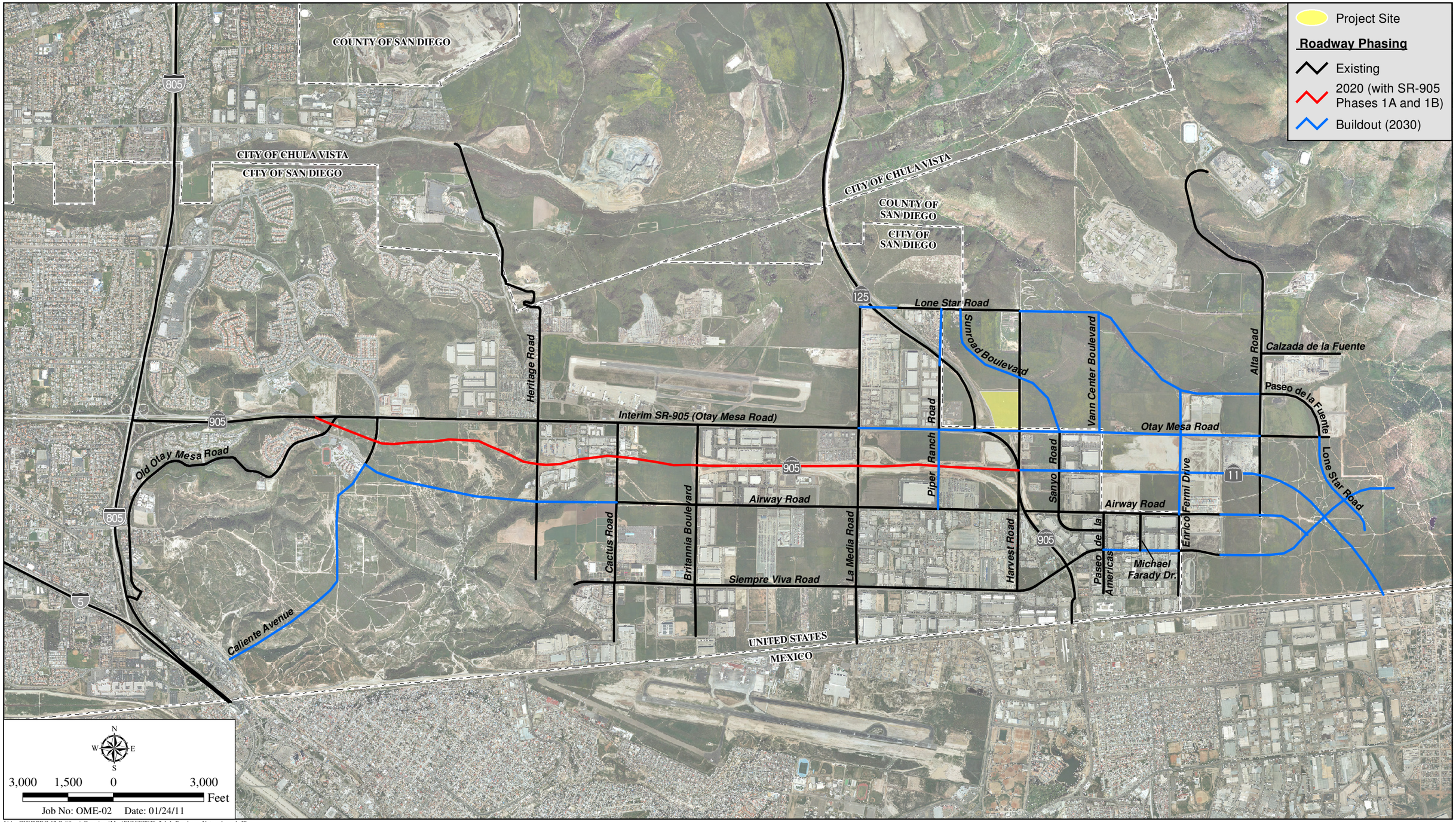
Impact	Location	Jurisdiction	Impact Scenario	Mitigation	Mitigation Effect	Mitigation Feasibility	Is Mitigation Proposed by Applicant?	Final Significance of Impact
TR-2 (cont.)				The Project Applicant shall conduct and submit a detailed signal warrant analysis prior to issuance of the first building permit. The signal shall be installed when warrants are met. Prior to the issuance of the first building permit of the Project, the Project Applicant shall either (i) have constructed intersection improvements, or (ii) entered into a secured agreement with the City and, if applicable, Caltrans to construct the improvements. If an agreement is entered into with the City and, if applicable, Caltrans, the agreement should specify that the improvements be operational prior to issuance of building permits. (Infeasible to guarantee completion)				
TR-3	Airway Road/Sanyo Avenue	City	Direct and Cumulative (2020)	**M-TR-3**: Airway Road/Sanyo Avenue (City) – If not completed by another development, ensure the following intersection improvements are implemented to the satisfaction of the County of San Diego and City of San Diego Departments of Public Works: Signalize when warrants are met and widen the intersection to provide the following lane configuration: one eastbound shared left-through-right lane; one westbound left-turn lane, one westbound through lane, one	Improve traffic flow from unacceptable LOS F to acceptable LOS C	Infeasible to guarantee since outside the jurisdiction of the County of San Diego	Yes	Significant (mitigation potentially infeasible)

Table 2.1-14 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Impact	Location	Jurisdiction	Impact Scenario	Mitigation	Mitigation Effect	Mitigation Feasibility	Is Mitigation Proposed by Applicant?	Final Significance of Impact
TR-3 (cont.)				westbound right-turn lane; one northbound left-turn lane; one northbound shared through-right lane; one southbound shared left-through lane; and one southbound right-turn lane. The Project Applicant shall conduct and submit a detailed signal warrant analysis prior to issuance of the first building permit. The signal shall be installed when warrants are met. Prior to the issuance of the first building permit of the Project, the Project Applicant shall either (i) have constructed intersection improvements, or (ii) entered into a secured agreement with the City to construct the improvements. If an agreement is entered into with the City, the agreement should specify that the improvements be operational prior to issuance of building permits. (Infeasible to guarantee completion.)				

Table 2.1-14 (cont.)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Impact	Location	Jurisdiction	Impact Scenario	Mitigation	Mitigation Effect	Mitigation Feasibility	Is Mitigation Proposed by Applicant?	Final Significance of Impact
TR-4	Airway Road/ Paseo de las Americas	City/County	Cumulative (2020)	**M-TR-4:** Prior to issuance of building permits, the Project Applicant shall pay the County's Traffic Impact Fee (TIF). The TIF will provide for signalization and widening of the Airway Road/Paseo de las Americas intersection to the following lane configurations: signalization; one eastbound left-turn lane; one eastbound through lane; one eastbound shared through-right lane; one westbound left-turn lane; one westbound through lane; one westbound shared through-right lane; one northbound shared left-through lane; one northbound right-turn lane; and one southbound left-through-right turn lane.	Improves traffic flow from unacceptable LOS F to acceptable LOS C	Feasible (included in the TIF program)	Yes	Less than Significant



I:\ArcGIS\P\PDC-12 CaliforniaCrossings\Map\ENV\EIR\Fig2-1-1_Roadway_Network.mxd -JP

Local Roadway Network

CALIFORNIA CROSSINGS

HELIX Environmental Planning

Figure 2.1-1